V. ARTIFACT ANALYSIS

Results of the artifact analyses are detailed in this chapter. The procedures followed for artifact cataloging, analysis and treatment are outlined in detail in the following section (Section A) of this chapter. After completion of the artifact cataloging and dating analyses, Depositional Units (DUs) were defined to provide a basis for synthesis and comparison of various contexts. The depositional units reflect the principal historical events that shaped the archaeological record, and a description and discussion of the individual depositional units is provided in Section B. The final section of this chapter, Section D, presents the results of the artifact analyses, including descriptions of the cultural material recovered as a result of excavation.

A. LABORATORY METHODS

1. Basic Artifact Processing

The laboratory processing and analysis were carried out in two phases. Preliminary processing of the collections was undertaken immediately upon completion of the fieldwork and included cleaning, rough-sorting and tabulation of the artifact collections according to 11 major classes. The classes used for the initial rough-sort tabulation are as follows:

Historic Ceramics
Curved Glass (bottle, table and furniture glass)
Pipes
Small Finds (coins, utensils, personal items, etc.)
Architectural (nails, flat glass, etc.)
Bone
Floral
Shell
Aboriginal Lithics
Aboriginal Ceramics
Twentieth-Century Items and Materials

All materials were washed or dry-brushed as appropriate, and the materials from each of the 11 major artifact classes were placed in separate resealable plastic bags with cards indicating provenience. The results of the rough-sort tabulation were included with the interim project report (Louis Berger & Associates 1986a).

All historic artifacts and diagnostic glass from the high priority units were marked using india ink on a base of clear nail polish. After marking, the ink was covered with a coat of clear nail polish to seal and protect the label. Artifacts were marked with the accession number assigned by the Delaware Bureau of Archaeology and Historic Preservation, as well as the catalog numbers assigned by LBA to record specific proveniences within the site. The assigned accession number for Block 1184 is "86/68". The catalog numbers and their corresponding proveniences are listed in Appendix B.

After cleaning and rough-sort tabulation, the collections were examined to evaluate the general date ranges represented in various contexts and to assess the integrity of the deposits, as represented by the relative degree of ceramic and glass vessel completeness. The results of this assessment, together with the rough-sort artifact tabulations, provided a basis for development of a research design and work plan for the final stage of analysis.

The preliminary analysis permitted the identification of specific areas within the site where intact, eighteenth-century deposits had been preserved. As a result, it was possible to assign priority to certain excavation units, based on their potential to provide information pertaining to the eighteenth-century occupation of Block 1184. Other units were assigned low priority for additional laboratory analysis, since it was determined that they had been severely disturbed or that they did not contain eighteenth-century deposits. Accordingly, a work plan was developed that utilized a basic level of analysis (Stage 1) for the low priority contexts and an intensive level of analysis (Stage 2) for the high priority contexts. The specific Stage 1 and Stage 2 artifact analyses are described below.

2. Conservation

Artifacts requiring conservation were segregated from the collection and treated according to material type. Conservation treatment was applied to four types of material: a coin, bottle glass sherds, a delft plate and turned window leads.

The coin was of copper alloy composition and it had been badly corroded. After initial cleaning with a mild non-ionic detergent and a soft brush, the coin was degreased in acetone and placed in a beaker with demineralized water. It was then subjected to a series of boiling and cooling treatments to remove soluble chlorides. After cooling, the water was tested for chlorides, using a 2% hydrochloric acid solution and a 2% solution of silver nitrate. The treatment was repeated with fresh demineralized water until the solution tested negative. The coin was then thoroughly rinsed, first with demineralized water, then with acetone, to assure quick drying and to degrease the artifact prior to sealing. The surface was cleaned manually with a glass bristle brush, allowing identification and dating. It was then sealed in a solution of Acryloid B-48 in acetone and xylene and allowed to air dry. Finally, it was wrapped in acid-free tissue and stored in a sealed plastic bag with silica gel.

Treatment was applied to diagnostic bottle glass sherds that exhibited surface deterioration. The sherds were coated with a 10% solution of Acryloid B-72 in toluene. After drying, the sherds were sealed in plastic bags.

A highly fragmented delft plate was also treated. The plate was excavated with some of the surrounding soil in order to retain as much of the glaze as possible. In the laboratory, the sherds were carefully dry-brushed to remove the soil. Each sherd was coated with a 5% solution of polyvinyl acetate (PVA, AYAF) in acetone to prevent further spalling of the glaze. Glaze that had spalled during cleaning was affixed at this time. Two coat were applied to each sherd, then the sherds air-dried. The plate was then reconstructed using CM Bond M-3, a special adhesive for conservation purposes.

The treatment of the window leads was carried out to gain information about the leads rather than as a conservation procedure. The specific treatment procedure was done in accordance with the recommendations of Susan Hanna of Historic St. Mary's City, Maryland. The leads were treated in order to determine if any type of mark or date was present on their interiors. First the leads were soaked in demineralized water for several hours to loosen any soil; then they were rinsed and put into a bath of Ethylenedinitrilotetracetic acid (EDTA) in demineralized water to loosen incrustation. The leads were then rinsed under running water and brushed with a soft brushed. Each lead was placed on a flat surface and the seams were gently opened with a scalpel. The leads were brushed to remove remaining incrustations and rinsed under running water to assure removal of all the EDTA. There were allowed to air dry for at least 12 hours.

TABLE 4. COMPUTER DATABASE STRUCTURE.

PRINCIPAL DATAFILES

PROVENIENCE
CATALOG NUMBER (=)
LOT
UNIT
STRATUM
LEVEL
FEATURE
COORDINATES
DEPOSITIONAL UNIT
REMARK

FLORAL/FAUNAL
CATALOG NUMBER (=)
COUNT
FLORAL
FAUNAL
FAMILY
SPECIES
BOTANICAL NAME
COMMON NAME
ELEMENT
SIDE
WEIGHT
CROSS-MEND NO.
CHARRING
GNAWING
BUTCHERING
AGE AT DEATH

HISTORIC ARTIFACTS
CATALOG NUMBER (=)
COUNT *
WEIGHT*
TYPE*
SUBTYPE*
BEG.DATE#
END DATE#
MNV
VAR1
VAR3
VAR4
VAR5
VAR6
VAR7
VAR8
VAR9
VAR11
VESSEL NO.
%COMPLETE
COMMENT*
PATTERN*#
GROUP*#
CLASS*#
FUNCTION
TRANSLATION*#

PREHISTORIC ARTIFACTS
CATALOG NUMBER (=)
COUNT*
WEIGHT*
TYPE*
SUBTYPE*
CATEGORY
SUBCATEGORY
CONDITION/BREAKAGE
CORTEX
HEAT ALT.
LENGTH
WIDTH
THICKNESS
EDJPLAT.
EDJPLAT2
EDJPLAT3
DAMAGE/WEAR
DAMAGE/WEAR2
DAMAGE/WEAR3
FIELD1
FIELD2
XSRFTRT.
ISRFTRT.
XDCRAT
IDCRAT
COMMENT*
PATTERN*#
GROUP*#
CLASS*#
TRANSLATION*#

CONTENT OF VARIABLE FIELDS

FIELD	CERAMICS	GLASS	SMALL FINDS	PIPES
VAR1	Maker's Mark	Maker's Mark	Maker's Mark	Maker's Mark
VAR3	Wear	Wear	Material	
VAR4	Decoration or Motif/Pattern	Motif	Decoration	
VAR5	Form	Manufacturing Tech.	Characteristics	
VAR6	Percent Complete	Color	Color	
VAR7		Base		Use
VAR8		Finish		
VAR9				Stem Bore Diameter
VAR11		Embossment		

(=) Linkage field.

* Field common to both historic and prehistoric datafiles.

Automatic entry from external datafile.

After drying, the interiors were brushed with a glass bristle brush and examined for any interior marks. The leads were degreased in ethyl alcohol and placed in a bath of microcrystalline wax, removed when coated, and allowed to air dry. The artifacts were examined for any marks, wrapped in acid-free tissue and sealed in plastic bags that had perforated for ventilation.

3. Computer Cataloging, Coding and Database Design

Artifact cataloging and tabulation was accomplished by a database system developed for microcomputers. The overall database for the Wilmington Block 1184 project contains four principal files: (i) provenience, (ii) historic artifacts, (iii) prehistoric artifacts, and (iv) floral and faunal remains. The rough-sort tabulations are also included in a separate datafile. The overall structure of the database's principal files is shown in Table 4. Separate coding forms were prepared for coding of the major artifact groups (ceramics, glass, small finds, pipes, etc.). A description of the information in the principal files is presented below.

After completion of the artifact cataloging and data entry, a series of preliminary computer-generated reports were prepared. These included simple listings generated by various sorting criteria as well as more analytically useful computations and data summaries. The latter included: (i) summaries by provenience of artifacts for which a beginning date of manufacture (TPQ) was known; (ii) computation of Mean Ceramic Dates (South 1977) or MCD reports summarized by level, stratum, unit and lot; and (iii) ceramic and glass vessel summaries listing all proveniences that contributed cross-mending sherds to a particular vessel. A preliminary series of reports was generated prior to the construction of Depositional Units. After depositional units were defined, a final series of reports was generated to provide data summaries and dating information for the depositional units. Additional catalog listings and specialized reports were generated as needed.

Provenience. Nine variables or fields of provenience information are included in the provenience file. Five fields (LOT, UNIT, STRATUM, LEVEL and FEATURE) were taken directly from the field excavation records. Prior to the actual coding of artifacts, a numeric sequence of CATALOG NUMBERs was assigned to the field provenience list so that each unique provenience could be identified by a single number. The catalog numbers run from 1 to 140, and were assigned so that all proveniences within a particular excavation unit form a consecutive block of numbers. Appendix E lists the assigned catalog numbers with the corresponding provenience information. Two additional fields, COORDINATES and DEPOSITIONAL UNIT were completed after data entry and preliminary analysis had been completed. The COORDINATES field simply expresses the UNIT field in numeric, rather than text format. For example, the UNIT field expresses a particular test unit name as "N60/E50," while the COORDINATES field expresses the same unit name as "60.50." The COORDINATES field was used only for units on Lot 58 that were identified by grid coordinates. The DEPOSITIONAL UNIT field was assigned after completion of the dating and cross-mend analysis. Construction and identification of particular depositional units is discussed later in this chapter.

Historic Artifact Cataloging. The datafile for historic artifacts contains 24 fields or variables, although not all fields were completed for each artifact. The TYPE and SUBTYPE together denote the primary artifact identification. COUNT simply refers to the number of items in a particular provenience that share the same modifiers or attributes. WEIGHT, expressed in kilograms, was recorded in some cases, most notably shell.

TYPE, a three-character text field, begins with a letter that denotes major artifact groupings, for example "C"--ceramic; "G"--glass; "P"--pipes. The second and third letters denote more specific information, such as functional categories, ware groups, etc., as indicated in the examples below:

GBA	Glass, Bottle, Alcohol;
CER	Ceramic, Coarse Earthenware, Red Bodied;
SAB	Small Finds, Architectural, Building Materials.

SUBTYPE, a two-digit numeric field, provides more specific identifying information, as show in the following examples:

GBA 04	Wine/Liquor Bottle with Seal;
CER 05	Red Bodied Earthenware with Green Glaze;
SAB 02	Brick, Glazed.

Together, the TYPE and SUBTYPE fields comprise the minimal level of artifact cataloging, and these fields were completed for all artifacts. Using the TYPE and SUBTYPE field codes, the TRANSLATION field provides a text description, drawing from an external datafile.

The BEGIN DATE and END DATE indicate the manufacturing date range for specific artifact types. In many cases, these dates are automatically supplied from an external datafile that links the manufacturing date range to particular combinations of TYPE and SUBTYPE. However, if a more specific date range can be determined, the automatically entered default dates may be overridden by the analyst. A site end date of 1985 was used in cases where a particular item is presently being manufactured.

Nine fields (VAR1, VAR3, VAR4, VAR5, VAR6, VAR7, VAR8, VAR9 and VAR11) are available for coding of more specific attributes pertinent to the ceramics, glass, pipes, or small finds. The specific use of these fields is indicated in Table 4 and described in the following sections specific to each artifact class.

The FUNCTION field is used to denote a specific functional group for the glass and ceramics. When available, this information may be used to interpret activities represented in an assemblage, with specific attention to patterns of consumer behavior. This classification follows earlier studies completed by Beidleman et al. (1983), Klein and Garrow (1984) and LBA (1986b). The functional categories for the ceramic and glass vessels are listed below:

Ceramic Vessels	Glass Vessels
Teawares	Wine/Liquor Bottles
Tablewares	Soda Mineral Water Bottles
Food Preparation	Culinary/Condiment Bottles
Food Storage	Household Related Bottle-Other
Household Furnishing/ Decorative	Misc. Bottle-Other
	Drinking Vessel/Non-Stemware
Toys	Drinking Vessel/Stemware
Miscellaneous	Miscellaneous Tableware
Multifunction	Lighting Related
Bottles	

The COMMENT field allows the analyst to code a remark with the artifact record (for example, "additional research needed," or "pattern name included") or to supply additional information specific to individual artifacts.

The MNV field refers to the Minimum Number of Vessel count for glass and ceramic vessels. The specific procedures used for glass and ceramic MNV determinations are described below in the sections pertaining to each material class. The VESSEL NO. field provides the number assigned to a specific vessel by the glass or ceramic analyst.

The %COMPLETE was used to indicate the estimated percentage of completeness for the ceramic vessels.

The PATTERN, GROUP and CLASS fields contain the specific categories assigned to an artifact, following South's (1977) Artifact Pattern Analysis model. This classification system is useful primarily for recognition of certain site types and activities, and its quantitative basis allows comparison of different assemblages. The GROUP and CLASS fields used for analysis of the Block 1184 collections are generally equivalent to the groups and classes originally formulated by South, with some modifications and expansion (Louis Berger & Associates 1987a:VII-95). The PATTERN field is a concatenation, or combination, of the GROUP and CLASS fields to facilitate certain computer operations.

Prehistoric Artifact Cataloging. Prehistoric artifacts recovered from Block 1184 constitute a minor component of the collections. Procedures followed for cataloging the prehistoric collection are discussed below in Section 4.e.

Floral and Faunal Specimen Cataloging. After cataloging and analysis of the floral and faunal material, except shell, was completed by a consultant, the floral and faunal data were integrated into the overall database. Specific procedures used to catalog the floral and faunal materials are discussed in Chapter VI.

4. Analytical Methods

a. Ceramics

The ceramic collection from Block 1184 was analyzed using a standard format developed by the LBA Cultural Resource Group. This format is based on the South/Noel Hume typology (South 1977), as modified for use in a computerized system (Stehling in Geismar 1983; Stehling and Janowitz 1986; Louis Berger & Associates 1987a, 1987b).

As indicated above, two levels of analysis were employed for the tabulation of ceramics. The Stage 1 ceramic analysis was limited to tabulation of sherds according to their ware types and surface treatments and, if present, maker's marks. The Stage 2 analysis included recordation of information noted during the Stage 1 analysis as well as data concerning vessel form, vessel completeness, wear, decorative motif, and minimum number of vessel (MNV) determinations. Those sherds which were cross-mended and given vessel numbers were tabulated on separate vessel data entry forms which also included information about the amount of wear and percentage complete.

The initial procedure for the Stage 2 ceramic analysis involved (i) the laying out of all sherds from the selected contexts, (ii) sorting of the sherds by type, and (iii) cross-mending and vessel

reconstruction. MNVs and Vessel Numbers were assigned to sherds which either cross-mended between proveniences or which mended to form more than 25% of a vessel within one provenience. For each vessel, cross-mending sherds were tabulated according to provenience, to support interpretations of depositional or site formation processes. MNVs were also assigned to non-mending but distinct rim sherds and to unique body or base sherds. All of the vessels chosen for photography and a majority of the other reconstructions were glued together using a special conservation adhesive, CM Bond M-3.

The following paragraphs summarize methodology and attribute coding procedures used in the ceramic analysis. General cataloging procedures are described above in the "Computer Cataloging and Coding" section.

TYPE/SUBTYPE. The first letter in ceramic TYPE is always "C," indicating ceramic. The second letter may be "E" (coarse earthenwares), "R" (refined earthenwares), "S" (coarse stonewares), "F" (refined stonewares), "P" (porcelains), or "O" (unidentifiable). The third letter refers to specific ware types ("R" for Redware, "T" for White Salt-Glazed Stoneware, etc.). The SUBTYPE numbers refer to the particular decorative treatments or named types (for example, CER04 = Redware, Dark Brown to Black Glaze; CES70 = Red Bodied Slipware, Philadelphia Style Petaled; etc.). These ware types can have specific dates or may be general and undated. Sources used for dating include, but are not limited to, Archer (1973), Archer and Morgan (1977), Denker and Denker (1985), Howard (1984), Macintosh (1977), Miller (1980), Noel Hume (1970a) and South (1977).

BEGIN DATE and END DATE. These reflect the date range of a particular TYPE/SUBTYPE. They are assigned automatically by the computer, but when a more narrow range can be determined from maker's marks or particular decorations or forms, these fields are entered manually by the analyst.

FORM. This indicates the shape and possible function for the sherd or vessel. General categories, such as "Flatware - Base," are used for sherds whose small size or ambiguous characteristics make a determination of form problematical.

DECORATION/MOTIF. This includes descriptions of specific decorations (e.g, "Chinoiserie - Landscape"), pattern names (e.g., "Willow"), and general descriptions (e.g., "Fazackerly Palette").

MNV. The Minimum Number of Vessels is included if a sherd has been assigned an MNV count.

COMMENT. Aside from codes common to all artifact classes, comments specific to ceramics may indicate conditions such as "Organically Stained" or "Burned."

WEAR. Wear refers to both the number and extent and location of abrasions, cuts, nicks, etc. on a vessel, providing information which may help in determining use. The amount of wear was coded as "None," "Some," or "Heavy," and location of use marks was recorded as "On Interior/Face," "Around the Rim," or "On the Foot Ring." The methodology was based on Griffiths (1978), but there was insufficient time to distinguish between knife cuts, stir cuts, etc. At the simplest level, lack of wear can be used to identify commercial deposits (Geismar 1983), and the location and amount of wear can also provide information about the actual utilization of specific vessels (Griffiths 1978).

PERCENT COMPLETE. The degree of vessel completeness was recorded by estimating the percentage of the whole vessel represented by the cross-mended sherds. This measurement can aid in the identification of different types of deposits and refuse disposal patterns (Schiffer 1983; Louis Berger & Associates 1986b). Vessel completeness was recorded according to the following categories: less than 25%; 26 to 50%; 51 to 75%; 76 to 99%; and 100% complete.

b. Curved Glass

After completion of the rough-sort tabulation, the identification and tabulation of curved glass proceeded unit by unit according to functionally distinct groupings based on "Bottle," "Table," or "Other" use categories. Window glass and other architectural glass was subsumed for analysis under Small Finds, described below. Stage 1 glass analysis primarily involved the recording of descriptive attributes of the glass sherds, i.e., color, finish and/or base type, manufacturing technique, motif, embossment, etc. Stage 2 glass analysis included the same recording of descriptive sherd attributes, but also included, when applicable, Minimum Number of Vessel (MNV) determinations, and descriptions of individual vessels. The following paragraphs summarize the methodology and attribute coding procedures used in the glass analysis. General cataloging procedures are described above in the "Computer Cataloging and Coding" section.

TYPE/SUBTYPE. Tabulation of the glass proceeded by sherd according to artifact codes organized by function (TYPE) and form (SUBTYPE). The first letter "G," standard for all codes, denotes the artifact as glass. The second letter denotes the general functional category, either "B" (Bottle), "T" (Table) or "O" (Other) Glass. The third letter in the TYPE code provides more specific functional information. The two-digit SUBTYPE number denotes vessel form (e.g., GBA03 = Wine/Liquor Bottle; GTT11 = Tumbler, Undecorated, General).

All artifacts identified as to specific function and form were coded as such regardless of the degree of fragmentation. The specific vessel part(s) in the collection were noted by coding the appropriate field(s), i.e, "base" and "finish." Whole and fragmented bases, finishes, rims, and body sherds for which specific functional forms could not be determined were accommodated under "Unidentified" and "Miscellaneous" categories. Non-form-specific sherds were coded as such, or under expanded codes such as "Wine/Liquor Flask--Strap-sided."

BEGIN DATE and END DATE. Dating of the glass assemblage proceeded according to established diagnostic criteria. These criteria, utilized either singly or in combination, include various technological aspects of glass manufacture, such as finish treatments and mold markings, datable bottle embossments, and maker's marks. When applicable, both a beginning and end date of manufacture were recorded. In instances where no end date of manufacture was available, only the beginning date (Terminus Post Quem) for the artifact was recorded. Sources used for dating include Diamond (1983), Jones and Sullivan (1985), McKearin and Wilson (1978), Munsey (1970), Toulouse (1971, 1977). Additional sources consulted include Baugher-Perlin (1982), Cheney (1980), Jones (1971), Klamkin (1973), McKearin and McKearin (1972), and Noel Hume (1961, 1974, 1982).

COLOR. In general, color was assigned to glass sherds purely for descriptive purposes and is broadly defined for this collection. All shades of olive green, for example, are coded as "light olive/dark olive green."

FINISH. Finish types in the collection fall exclusively within the one-part and two-part categories. Coded descriptions relate, for the most part, to the shape of the element(s) comprising each finish. In some cases, common form names such as "Crown" or "Patent/Extract" were used.

BASE. The majority of the designations for base types in the collection refer to the marks on the basal surfaces of both bottles and tableware, indicating the particular empontilling tool used to hold the vessel while the finish was formed. The lack of any markings on several bottle bases indicated that a "snap case" device was used to hold the bottles in place while their finishes were formed. Machine-made basal markings were also encountered.

MANUFACTURING TECHNIQUE. Manufacturing technique refers to the distinctive mold seams and markings found on the bodies (and sometimes on the basal surfaces and over the finishes) of completed glassware. The majority of datable glass in the collection evidenced the common markings associated with automatic machine manufacture. Vessels for which a specific mold type could not be determined were coded as "mold-blown/mold type indeterminate" while vessels for which manufacturing technique was unidentifiable were coded simply as "unidentified".

WEAR. Use of this variable was limited to recording melting or burning.

MOTIF. Motif descriptors were used to identify decorative patterns.

EMBOSSMENT. Complete lettered embossments were recorded as encountered.

MAKER'S MARK. Identifiable maker's marks, usually found on the basal surfaces of bottles, were also coded as encountered. Most often in the form of a graphic design, initials, or a combination of both, each mark was drawn and assigned a number which identifies the company of origin. The primary source utilized for identification was Toulouse (1971).

MNV. Minimum Number of Vessel (MNV) counts were generated during the Stage 2 analysis, which primarily included artifacts assignable to the eighteenth-century parsonage occupation. Procedures for assignment of MNVs were devised in accordance with the extremely fragmentary nature of the glass assemblage.

For the majority of the glass forms, MNVs were primarily defined by counting the number of bases in the assemblage. All whole and fragmented bases were set aside as each provenience was prepared for tabulation. Fragments were grouped by form, color, and pontil type (when evidenced) and mended to the fullest extent possible within each provenience. Cross-mends were first made within each excavation unit and then systematically attempted between units. This was done to decrease the chance of possible multiple counting of vessels that may have cross-mended between different contexts (levels, strata or units). An MNV of "one" was assigned to each whole base. As a general rule, single fragments and those mending to form only a partial base were assigned an MNV of "one" if the pontil type could be determined or if at least half the vessel could be reconstructed by cross-mending. When a base cross-mended between two or more proveniences, the MNV was assigned to the stratum and level containing the greatest number of fragments or, if the number of fragments was equal, to the stratigraphically higher provenience.

In several instances, an MNV of "one" was assigned to a base fragment when it was determined by visual inspection to be unique. Similarly, the absence of vessel bases or a lower ratio of bases to other vessel parts required an alternate approach for MNV determinations, based on uniqueness. In these cases, MNV counts were assigned to finishes, rims or body sherds on the basis of unique type, motif/pattern, color, etc. The procedures described above for mending, cross-mending and provenience assignment remained constant, regardless of the various criteria used for assignment of MNVs.

VESSEL NUMBER. Vessel numbers were assigned in conjunction with the MNV determinations. An "A" suffix to the vessel number indicates a probable association with a vessel within the provenience in which the MNV was assigned. A "B" suffix indicates a probable association outside the provenience of the assigned MNV.

Vessels chosen for photography were glued together with a special conservation adhesive, CM Bond M-3.

COMMENT. Comment codes were utilized to convey additional descriptive data not covered in the standard coded fields. These comments may include, for example, "Dated by Association," "Typed by Association," "Probably Twentieth Century," etc.

c. Small Finds/Architectural

The "Small Finds/Architectural" category is catch-all that includes all manufactured items other than ceramics, curved glass and pipes. Small finds were analyzed using a standard coding system developed by the LBA Cultural Resource Group, based on the South/Hume typology (South 1977). While the glass and ceramics artifacts were treated at two different levels of analytical intensity, the small finds from the entire site were subject to a single level of tabulation and analysis. All items were identified by group, class and material type. For certain artifact types, additional descriptive information, such as color or weight, was provided. The remaining variable fields were used only when additional information could be determined from the artifact.

TYPE/SUBTYPE. The TYPE code begins with "S" to identify the artifact as part of the Small Finds/Architectural category. The second letter designates the group (e.g., A = Architectural, D = Kitchen), while the third identifies the specific class (eg., SAG = Architectural Glass). The numeric SUBTYPE codes provide a more specialized breakdown within classes.

WEIGHT. Weights were given for brick, mortar, glass, coal and shell.

BEGIN DATE and END DATE. Dates were entered when the manufacturing range could be determined.

MATERIAL. The material composition was described for each artifact.

CHARACTERISTIC. This modifier was used to describe the form or manufacturing technique of each artifact. If no diagnostic attribute was evident, the artifact was described as whole or fragmentary.

DECORATION. This attribute was used to describe purely decorative characteristics, as opposed to those related to form or manufacture.

COLOR. Color was recorded for flat glass and brick.

MAKER'S MARKS. Maker's marks were recorded as encountered, to identify a specific manufacturer or place of origin.

COMMENT. Comment codes were utilized to convey additional descriptive data not covered in other fields, for example, evidence of burning.

d. Pipes

Tobacco pipes were tabulated according to a single level of analysis, regardless of whether or not they were from high and low priority contexts.

TYPE/SUBTYPE. The first two letters of the TYPE code are "PT" (Pipes-Tobacco) to identify the artifact with this category. The third letter identifies the artifact as a stem ("S"), an English bowl ("E"), or a Dutch bowl "("D"). The SUBTYPE codes designate specific bowl or stem shapes or other characteristics.

MAKER'S MARK/DECORATION. This field is used to describe the maker's marks and/or decoration.

USE. This modifier denotes the amount of discoloration from smoking, the presence of bite marks on the stem, etc.

BORE DIAMETER. The bore diameters of stems were measured in sixty-fourths of an inch, using a set of drill bits ranging from 4/64th to 9/64th. This measurement was recorded simply as the numerator (for example ("4" = 4/64th-inch).

e. Prehistoric Artifacts

Analysis of the prehistoric artifacts was carried out in a fashion similar to that of the historic artifacts, in that codes were used to enter data into a computerized database. The datafile for prehistoric artifacts includes a number of fields identical to those in the historic artifact datafile (CATALOG NUMBER, TYPE, SUBTYPE, COUNT, WEIGHT, TRANSLATION, PATTERN, GROUP, and CLASS).

The prehistoric assemblage consisted of only 76 lithic items and 4 aboriginal ceramics. Therefore, the following methodological description emphasizes the analysis of lithic remains. The level of lithic analysis used for the present project is discussed below and summarized in Table 5.

TYPE/SUBTYPE. The entire collection was classified according to (i) major formal classes (ceramics, bifacial tools, unifacial tools, cores, chunks, flakes, cobble tools, ground stone tools, and fire-cracked rock) , (ii) raw material and (iii) presence or absence of heat alteration. The three text characters of the TYPE field denote major artifact classes (e.g., LMC = Lithic-Modified-Core; LMB = Lithic-Modified-Biface). The SUBTYPE field denotes raw materials, such as rhyolite, black chert, quartzite, etc. The SUBTYPE field for ceramics indicates the temper type.

TABLE 5. Prehistoric Lithic Classification Summary.

TYPE/ FORMAL CLASS	CATEGORY/ DEFINITION	SUBCATEGORY/ DEFINITION
BIFACIAL TOOLS	Points (stemmed, side notched, etc.)	Defined point types
	Scrapers (sidescraper, endscraper, etc.)	
	Early Stage: flakes removed from two faces; cortex is present if a cobble is being used; margins are sinuous; edge may exist completely around specimen	
	Middle Stage: majority of cortex or original surface has been removed; primary thinning succesfully completed; edges are fairly well centered	
	Late Stage: secondary thinning successfully completed; shaping may also have been accomplished; at the completion of this stage, the specimen needs only to be given the stylistic characteristics of various point types	
	General: too small to positively identify the reduction stage (fragment); does not conform to defined tool types; cannot be placed along the staged reduction continuum	
COBBLE TOOLS		(various formal tool types)
GROUND STONE TOOLS		(various formal tool types)
CORES	Functional: large enough to produce usable flakes; exhibits at least one platform	
	Exhausted: usually small; platforms, if present, may be crushed and exhibit step flakes; hinged flake scars may also be present; cannot be rejuvenated	
	Prepared: evidence of platform preparation present; limited directions of flake removal	
	Unprepared: no evidence of platform preparation present; flakes may be removed multidirectionally; platform location may differ for each flake	
		Tested Cobble: one or two flakes removed from the cobble for the purpose of inspecting the suitability of the material; natural platforms utilized
		Single Platform: exhibits a single platform
		Double Platform: exhibits two platforms

TABLE 5--Continued.

TYPE/ FORMAL CLASS	CATEGORY/ DEFINITION	SUBCATEGORY/ DEFINITION
CORES (cont'd)		Polymorphic: flakes removed from several directions; platform location varies; no specific shape Bipolar: evidence of anvil use present in the form of damage and minor shock waves opposite platform(s) and in the opposing direction from flake removal scars Fragment: specimen identifiable as a core but has suffered abrupt truncation(s) Pyramidal: overall shape roughly depicts a pyramid or cone, the base of which is the location of platforms
CHUNKS	Blocky form; flake scars on multiple surfaces; usually multiple truncations; many are probable core fragments which cannot be positively identified due to truncated surfaces	
FLAKES	whole/broken cortex (p/a) heat treatment (p/a)	size classes: <5 mm; 5-10 mm; 11-20 mm; 21-30 mm; 31-40 mm; 41-50 mm; 50-60 mm; 61-70 mm; 71-80 mm; 81-90 mm; 91-100 mm; 101-110 mm; 111-120 mm; > 120 mm
FIRE-CRACKED ROCK		

COUNT was recorded for all artifact types, and WEIGHT in grams was recorded for ceramics, cores and cobble tools.

The CATEGORY and SUBCATEGORY fields provide more detailed formal and functional classifications particular to the major implement classes, as indicated in Table 5. The presence or absence of cortex (CORTEX field) was recorded for all lithic items, as was the presence or absence of thermal alteration (HEAT field). All tools (bifaces, cores and cobble tools) were measured (LENGTH, WIDTH and THICKNESS fields) with measurements recorded in millimeters.

Projectile points were sorted first according to general descriptive categories (side notched, stemmed, corner notched, triangular, etc.), with these general categories recorded in the SUBCATEGORY field. Three edge morphology measurements were made for each projectile point: blade form (EDJPLAT field); basal edge form (EDJPLAT2 field); and notch/shoulder form (EDJPLAT3 field). Edge angle measurements taken on the lateral blade margins were recorded to the nearest whole degree of arc in the FIELD1 and FIELD2 fields. Points were then assigned to a formally defined type if possible, with the point type recorded in the SUBCATEGORY field.

Cores, cobble tools and generalized bifaces were further sorted according to the CATEGORY and SUBCATEGORY field definitions listed in Table 5. As many as three fields (DAMAGE/WEAR, DAMAGE/WEAR2 and DAMAGE/WEAR3) were available for coding edge wear or use damage exhibited on tool edges.

Flakes, which form the major portion of the collection, were sorted and tabulated according to the following: raw material (SUBTYPE field), whole or broken (CONDITION/BREAKAGE field); presence/absence of thermal alteration (HEAT field) as well as the size categories. Flake size categories are listed in Table 5, with the codes entered into FIELD1.

The prehistoric ceramics in the collection are body sherds with quartz temper. Four fields were used to describe interior and exterior surface treatment and surface decoration. The fields XSRFTRT and ISRFTRT denote the surface treatments on the exterior and interior surfaces of the sherds. The fields XDCRAT and IDCRAT are available to describe exterior and interior surface decorations, but none of the sherds in the collection exhibited any surface decoration.

Finally, the prehistoric datafile includes the COMMENT, PATTERN, GROUP, CLASS, and TRANSLATION fields. With the exception of the COMMENT field, information for these fields were automatically entered by the computer.

B. DEPOSITIONAL UNITS

1. Goals and Methodology

As a device for synthesis of the artifact analysis, depositional units (DUs) were defined, and each provenience was linked to a specific DU in the computer database. In essence, a depositional unit is a formal device to "lump" or combine information from discrete excavation contexts, enabling more analysis to proceed according to data subsets defined with reference to the field and laboratory interpretations. Various criteria may be used for construction of depositional units or analytical units, including spatial proximity or separation, stratigraphic relationships, archaeological formation processes, post-depositional disturbances, deposit dates, artifact

fragmentation as indicated by vessel completeness or sherd sizes, cross-mend analysis, artifact frequency, artifact patterns, pedological matrices, etc. (cf. Louis Berger & Associates 1986b:129-131). All of these criteria have been used effectively, however it is important to note that the utility of these criteria varies according to particular site conditions as well as the particular analytical goals.

The research design for the present project emphasized the recovery and interpretation of refuse deposits associated with the eighteenth-century occupation of Block 1184. Accordingly, depositional units have been defined with the primary goal of isolating intact eighteenth-century deposits, so that the principal criteria used to define DUs are (i) spatial association, (ii) dating, and (iii) deposit integrity. Interpretation of the intact eighteenth-century deposits was the first, but not the only, research priority; and DUs were defined that reflected the later occupation of the block.

First, a formal stratigraphic analysis was undertaken for all excavation units, using the Harris Matrix method. This technique (Harris 1975, 1979) provides a two-dimensional, graphic portrayal of the chronological sequence of the deposits and architectural features that were excavated and recorded at a site. It is particularly useful for reconstructing complex depositional sequences often found at urban sites. Beginning with the context that represents the smallest unit of excavation and recordation, the excavation level or feature in this case, the stratigraphic relationship to other contexts is determined by reference to excavation records, plan drawings, spot elevations, and profiles. Each context may have one of three possible relationships with another; either (1) it is earlier than or beneath another, (2) it is later than or above another, or (3) it is equal to or contemporaneous with another. By determining the stratigraphic relationships of adjacent contexts, the larger sequences representing excavation units or block areas are eventually determined. In this case, stratigraphic diagrams were prepared for each excavation unit, and they are included in Appendix C.

After completion of the stratigraphic analysis, the preliminary computer reports were studied, particularly the results of the dating and cross-mend analysis. In a large measure, the field observations were sufficient to identify contexts that had been disturbed. However, the dating and cross-mend analysis provided more specific information on the extent to which the eighteenth-century deposits had been mixed with nineteenth- and twentieth-century material. Following the formal definition of depositional units, additional analyses and data summaries were prepared for interpretation and comparison.

The selection of deposit integrity as a primary criterion for definition of depositional units is based on the research design's focus on interpretation of the eighteenth-century Parsonage Lot occupation. Lot association, representing the largest scale of provenience, provided an immediate criterion for assignment of individual contexts to DUs. Historically, Lot 4 was never included in the Parsonage Lot, so that the two principal excavation areas within Block 1184, Lot 4 and Lot 58, were kept distinct. Accordingly, the depositional unit identification, or "names," included the lot number as a prefix. Depositional units within Lots 4 and 58 are designated by a letter suffix, for example, "58A."

The specific depositional units defined for each lot are discussed below. Appendix B provides a complete listing of the excavation contexts assigned to each depositional unit.

2. Lot 58

Five depositional units have been defined for Lot 58 (Table 6). The first DU, (58A) encompasses contexts that had been disturbed by nineteenth- and twentieth-century occupation and use of Lot 58. Ground disturbances that occurred on this lot include looting, the DelDOT archaeological testing program (Cuningham et al.1984) , the post-1981 DelDOT grading for Wilmington Boulevard, as well as construction of the G.W. Baker Machine Company. This DU includes contexts from virtually every unit across the lot, and the contexts assigned to DU 58A generally include the surface and immediate subsurface excavation levels of Stratum A. With the exception of Unit N65/E50, at least one level of each unit on Lot 58 has been assigned to DU 58A. The overall distribution of ceramic types (Table 7) shows that while DU 58A is dominated by eighteenth-century wares (e.g., delftware and white salt glazed stoneware), it does include a significant amount of later wares (e.g., whiteware, pearlware, yellowware, ironstone, etc.) as well.

The intact eighteenth-century deposits associated with the Parsonage Lot occupation are included in DUs 58B and 58C. Deposits assigned to these DUs are confined to the block of units bounded by the two foundation wall features (Features 2 and 12) that partially define the cellar of an eighteenth-century structure and by the foundation wall of the G. W. Baker Machine Company (Feature 3/9). Within this area, deposits assigned to DUs 58B and 58C are those with no apparent intrusions from looters' pits, pipe trenches, or less than precise backhoe excavation.

DU 58B includes undisturbed levels of the brick rubble and mortar layer (Stratum B) that capped the eighteenth-century refuse deposits. This stratum was characterized as a nineteenth-century deposit in the Phase 2 DelDOT report (Cunningham et al. 1984); as a result, a significant portion of this deposit was removed by backhoe during the LBA excavations. LBA's analysis of the material recovered from this layer indicates that Stratum B should be considered as belonging to the eighteenth-century Parsonage Lot occupation, given the large number of ceramic cross-mends between Stratum B and the underlying deposits as well as a close correspondence in the dates.

During excavation, the Stratum B rubble/mortar deposit was easily recognized and differentiated from adjacent deposits. However, a number of levels excavated in Stratum B were determined to have been disturbed; as a result these levels have been assigned to DU 58A. These levels include: (i) Level 2 in Unit N65/E55, which had been penetrated by the Feature 7 looter's pit and (ii) Levels 2 and 3 in Unit N70/E50, which had been disturbed by the Feature 15 sewer pipe trench. Level 3 in Unit N65/E60 has also been assigned to DU 58A, because this level includes a mixture of the eighteenth-century rubble and rubble from the G. W. Baker Machine Company cellar.

The large amount of architectural debris (primarily brick and mortar or plaster) in DU 58B indicates that this deposit represents a building demolition event. DU 58B has a ceramic Terminus Post Quem (CTPQ) of 1744 and a glass TPQ of 1745, but there is reason to believe that the specific demolition reflected in the archaeological record occurred at least ten years after these dates. First, the deposits underlying DU 58B have a TPQ of 1750. This date is based on the recovery of white glazed delftware sherds with a polychrome decoration whose style can be attributed to the last half of the eighteenth century. Also, the rubble layer in Unit N65/E60 contained two sherds of a white salt-glazed stoneware plate fragment with a cannon, battle axe and drum motif; this motif can be matched with one of the "King of Prussia" patterns that were produced to commemorate a 1757 military victory by Frederick the Great. While the sherds were recovered from the Stratum B rubble, the particular context has been assigned to DU 58A

TABLE 6. SUMMARY OF DEPOSITIONAL UNITS (DUs).

DU	DESCRIPTION	ARCHAEOLOGICAL DATING
58A	Mixed/disturbed 18th, 19th and 20th century deposits on Lot 58; disturbed by looting, grading, and building construction/demolition	MCD=1768.1 (n=637) CTPQ=1840 OTPQ=1933
58B	Brick rubble and mortar stratum within cellar of 18th century structure (Features 2 and 12); Lot 58	MCD=1754.3 (n=96) CTPQ=1744 OTPQ=1745
58C	18th century refuse deposits within cellar of 18th century structure (Features 2 and 12); Lot 58	MCD=1750.8* (n=633) CTPQ=1750* OTPQ=1745
58D	Demolition rubble deposit within cellar of G. W. Baker Machine Company; Lot 58	MCD=1844.8 (n=25) CTPQ=1885 OTPQ=1933
58E	Undisturbed yard deposits on Lot 58, outside cellar of 18th century structure (Features 2 and 12)	MCD=1806.8 (n=25) CTPQ=1835 OTPQ=n/a
4A	Yard and feature deposits on Lot 4, disturbed by looting and building demolition	MCD=1871.1 (n=165) CTPQ=1848 OTPQ=1954
4B	Undisturbed yard and feature deposits on Lot 4	MCD=1857.9 (n=27) CTPQ=1827 OTPQ=1889

*A decaled whiteware sherd (manufactured from 1885 to present) from Unit N65/E55, Stratum C, Level 4 was excluded from calculations; this item is believed to have been introduced during backhoe excavation.

MCD: Mean Ceramic Date
CTPQ: Terminus Post Quem based on ceramic artifacts
OTPQ: Terminus Post Quem based on non-ceramic artifacts

TABLE 7. CERAMIC TYPES BY DEPOSITIONAL UNITS.

CERAMIC TYPE	58A		58B		58C		58D		58E		4A		4B		TOTAL	
Earthenware																
Red Bodied	391	36%	184	63%	546	44%	1	3%	8	22%	103	33%	40	48%	1273	41%
Red Bodied Slipware	244	23%	26	9%	129	10%	4	13%	1	3%	6	2%	4	5%	414	13%
Salmon Bodied	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	0%
Buff/White Bodied	0	0%	0	0%	1	0%	0	0%	0	0%	1	0%	0	0%	2	0%
Buff/Ylw. Bd. Slip.	11	1%	3	1%	48	4%	0	0%	3	8%	2	1%	0	0%	67	2%
SUB-TOTAL	648	60%	213	73%	724	59%	5	16%	12	32%	112	36%	44	52%	1758	57%
Refined Earthenware																
Delftware	119	11%	17	6%	218	18%	0	0%	0	0%	0	0%	0	0%	354	12%
Creamware*	12	1%	0	0%	13	1%	8	26%	9	24%	0	0%	0	0%	42	1%
Pearlware	8	1%	0	0%	0	0%	1	3%	8	22%	5	2%	1	1%	23	1%
Whiteware**	52	5%	0	0%	1	0%	7	23%	3	8%	96	31%	9	11%	168	5%
Ironstone	7	1%	0	0%	0	0%	0	0%	0	0%	5	2%	0	0%	12	0%
Yellowware	3	0%	0	0%	0	0%	0	0%	0	0%	13	4%	2	2%	18	1%
Other	16	1%	1	0%	83	7%	0	0%	1	3%	0	0%	0	0%	101	3%
SUB-TOTAL	217	20%	18	6%	315	26%	16	52%	21	57%	119	39%	12	14%	718	23%
Other Earthenware	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	0	0%	1	0%
Stoneware																
White Salt-Glazed	120	11%	34	12%	81	7%	0	0%	1	3%	0	0%	1	1%	237	8%
Gray Stoneware	0	0%	0	0%	0	0%	0	0%	1	3%	67	22%	27	32%	95	3%
Brown Stoneware	1	0%	0	0%	0	0%	0	0%	0	0%	7	2%	0	0%	8	0%
Other Non Salt Glz.	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%
SUB-TOTAL	122	11%	34	12%	81	7%	0	0%	2	5%	74	24%	28	33%	341	11%
Other Stoneware	0	0%	0	0%	1	0%	0	0%	0	0%	0	0%	0	0%	1	0%
Porcelain																
Soft Paste	1	0%	0	0%	0	0%	1	3%	0	0%	0	0%	0	0%	2	0%
Hrd. Pst.-Non Oriental	8	1%	0	0%	0	0%	8	26%	0	0%	2	1%	0	0%	18	1%
Oriental Export	84	8%	27	9%	111	9%	1	3%	2	5%	0	0%	0	0%	225	7%
Other	4	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	4	0%
SUB-TOTAL	97	9%	27	9%	111	9%	10	32%	2	5%	2	1%	0	0%	249	8%
COLUMN TOTALS	1084		292		1232		31		37		308		84		3068	

*Creamware sherds in DU 58C are Whieldon-type glaze, not later (post-1760) creamware.

**Whiteware sherd in DU 58C is believed to be intrusive as a result of backhoe excavation in Unit N65/E65.

because of possible intrusions from the looter's pit. Because these sherds do not cross-mend to any other context, their deposition prior to the demolition event is probable but not positive. The date of 1757 may be considered as an "interpreted" TPQ for DU 58B.

Historically, it is known that the old parsonage was demolished in 1768, more than fifteen years after Pastor Acrelius began construction of the priest house at the corner of Spring Alley and Walnut Street (see Chapter III). The old parsonage was occupied by Pastor Hesselius in the early eighteenth century. The location of the old parsonage is shown on the Ferris map (1736) near the center of Spring Alley, however the source(s) used to prepare the Ferris map cannot be verified historically. The mapped location of the old parsonage corresponds fairly well with the structure defined by Features 2 and 12, therefore it is believed that the excavated structure is the remains of the old parsonage. There are no known nineteenth- or twentieth-century structures that correspond to the location of Features 2 and 12. Construction of the old parsonage began in 1701, and it is assumed that the structure was first occupied by Pastor Andreas Hesselius, who arrived in 1712.

Association of the brick and mortar rubble layer (DU 58B) with the dismantling of the old parsonage is not completely unambiguous. The old parsonage was described as a wooden building (see Chapter III, Section C). The brick rubble/mortar layer designated DU 58B would seem to represent the remains of a brick, rather than a wooden, structure. However, the brick/mortar layer is relatively thin, less than one foot, and therefore probably does not represent the destruction of a building made entirely of brick. It might represent a chimney or fireplace within a frame house. Aside from the historically documented dismantling of the old parsonage in 1768, there are other structural repair or demolition episodes that possibly could have produced an architectural rubble deposit such as DU 58B. These events include repair episodes to the third parsonage during the mid-1780s and the final destruction of the third parsonage in the nineteenth century. However, if the DU 58B deposits were associated with either of these events, artifacts dating to the late eighteenth century or the nineteenth century should have been recovered from the deposits. Since the interpreted archaeological TPQ for DU 58B is 1757, association of DU 58B with the dismantling of the old parsonage is the most plausible historical association.

DU 58C includes the refuse deposits within the cellar defined by the Feature 2 and 12 walls and beneath the Stratum B brick/mortar rubble (DU 58B). Whereas the brick/mortar rubble stratum represents a demolition event, the underlying deposits of DU 58C represent materials that either accumulated over time in the cellar or that were discarded into the cellar immediately prior to the demolition event. Both DUs represent intact eighteenth-century deposits, but they have been distinguished on the basis of deposit matrices, which are assumed to represent fundamentally distinct archaeological formation processes (cf. Schiffer 1983). Notwithstanding the difference in deposit matrices, the large number of ceramic cross-mends between DUs 58B and 58C (see Table 8) indicates that a certain amount of mixing occurred between the rubble and the underlying deposits.

The presence of a tiny decaled whiteware sherd (post-1885) in DU 58C can be attributed to an error during excavation, and it has been omitted from the dating computations. This sherd was recovered from Stratum C, Level 4 of Unit N65/E55. This level was exposed during the backhoe removal of Strata A and B, and it is likely that the whiteware sherd was introduced into Stratum C at that time. Discounting the whiteware sherd, DU 58C has an MCD of 1750.8 and a ceramic TPQ of 1750. The glass TPQ for DU 58C is 1745.

TABLE 8. VESSEL CROSSMENDS BETWEEN DEPOSITIONAL UNITS.

VESSELS	DEPOSITIONAL UNITS 58A	58B	58C	58D	58E	4A	4B
C 1	X	X	X				
C 2		X	X				
C 3	X		X				
C 4	X	X	X				
C 5			X				
C 6	X		X				
C 7			X				
C 8			X				
C 9			X				
C 10		X	X				
C 11	X	X	X				
C 12	X	X	X				
C 13	X						
C 14	X						
C 15	X	X	X				
C 16	X						
C 17		X	X				
C 18		X	X				
C 19	X		X				
C 20	X		X				
C 21	X	X	X				
C 22	X	X	X				
C 23		X	X				
C 24	X		X				
C 25	X	X	X				
C 26			X				
C 27	X						
C 28	X		X				
C 29	X		X				
C 30	X	X	X				
C 31			X				
C 32			X				
C 33	X		X				
C 34	X		X				
C 35		X	X				
C 36	X						
C 37			X				
C 38			X				
C 39	X	X	X				
C 40		X	X				
C 41	X						
C 42			X				
C 43	X						
C 44		X	X				
C 45	X	X	X				
C 46			X				
C 48	X	X					
C 49	X		X				
C 50	X		X				
C 51	X	X	X				
C 52	X	X	X				
C 53	X	X	X				
C 54			X				
C 56	X		X				

TABLE 8--Continued.

VESSELS	DEPOSITIONAL UNITS 58A	58B	58C	58D	58E	4A	4E
C 57		----X----	----X----				
C 58		----X----	----X----				
C 59	----X----	----X----	----X----				
C 60	----X----		----X----				
C 61	----X----						
C 62	----X----		----X----				
C 63	----X----		----X----				
C 64	----X----		----X----				
C 65	----X----		----X----				
C 66	----X----		----X----				
C 67			----X----				
C 68						----X----	
C 69						----X----	
C 70						----X----	
C 71						----X----	
C 72						----X----	
C 73						----X----	
C 74						----X----	----X----
C 75						----X----	----X----
G 1	----X----						
G 2	----X----						
G 3	----X----						
G 4	----X----						
G 5	----X----						
G 6	----X----						
G 7	----X----						
G 8	----X----						
G 9	----X----						
G 10		----X----					
G 11		----X----					
G 12	----X----						
G 13			----X----				
G 14			----X----				
G 15			----X----				
G 16		----X----					
G 17			----X----				
G 18	----X----						
G 19	----X----		----?----				
G 20			----X----				
G 21			----X----				
G 22		----X----					
G 23			----X----				
G 24			----X----				
G 25	----X----						
G 26	----X----						
G 27	----?----		----X----				
G 28	----X----						
G 29	----X----						
G 30			----X----				
G 31			----X----				

Note: ----X---- denotes sherds mending to a vessel occur within a depositional unit.
-----?----- denotes probable mend.
C denotes ceramic vessel.
G denotes glass vessel.
Vessel numbers C 47 and C 55 were not assigned.

It is assumed then that the structure represented by Features 2 and 12 is the foundation of the old parsonage. There is historical evidence that the old parsonage structure was extant until 1768 when it was dismantled. Construction of the old parsonage began in 1701, but it is known that the structure was in a deteriorated condition by 1742 when Reverend Peter Tranberg arrived in Delaware. When Tranberg built a new parsonage, the old building continued to be used for various purposes, including a kitchen, store-room, servant's quarter and stable.

The demolition event represented by DU 58B appears to represent the final abandonment of the old parsonage. Archaeological evidence suggests that this event occurred after 1757, and the historical record indicates that demolition of the old parsonage occurred in 1768. The deposits assigned to DU 58C potentially represent refuse associated with the various pastors' households and servants that occupied Lot 58 from the period prior to 1768. During that period, there were eight different pastors (see Table 1, Chapter III). The lack of creamwares (post-1762) in the refuse deposits suggests that the material is probably not trash from the Andrew Borrell (1758-1767) or Lawrence Girelius (1767-1791) households. Given the available historical and archaeological evidence, it is not possible to associate the DU 58C deposits with a particular household; rather these deposits can be assigned only a general association with the succession of households that occupied the parsonage lot in the early to mid-eighteenth century.

The processes that formed the intact eighteenth-century deposits may be interpreted by evaluation of the ceramic cross-mend patterns and overall vessel completeness. A vessel completeness index was calculated, based on estimates of the ceramic vessel completeness, because relative artifact completeness is assumed to provide information pertaining to archaeological formation processes (Schiffer 1983). In this case, each ceramic vessel that was assigned a vessel number was examined in terms of its overall completeness and placed into one of the following completeness categories: less than 25%; 26-50%; 51-75%; and 76-100%. The index is computed by ascertaining the percentage of vessels within each category, multiplying this percentage by an index (1 for less than 25%; 2 for 26-50%; 3 for 51-75%; and 4 for 76-100%). The products are then summed to provide an index ranging from 1.0 to 4.0, with higher values indicating a greater proportion of nearly complete vessels (LBA 1986b).

The ceramic vessels from Lot 58 have a completeness index of 1.60, which is indicative of a quite fragmented assemblage. The incomplete nature of most of this assemblage may indicate that the vessels were already quite fragmentary when they were discarded, but it is also possible that post-depositional disturbances are responsible for the lack of completeness. Compared to a number of sealed privy-well deposits excavated at Block 1101 (Louis Berger & Associates1986b:162), the vessel completeness index for the Parsonage Lot is at the low range. Within a sealed privy, such a low completeness index might be considered characteristic of re-deposited or displaced secondary refuse (Schiffer 1972; South 1977). However, in the present situation, the relatively low vessel completeness may be attributed to the various post-depositional disturbances, particularly the looting, grading and backhoe excavation, as well as the fact that the deposit was not entirely excavated. Considering the severity and extent of these disturbances, the overall integrity of the eighteenth-century deposits should be considered remarkably high. It is therefore argued that the deposits represented by DUs 58B and 58C represent in situ or secondary refuse, that is, the material was discarded or lost in its location of use or deposited directly into the old parsonage cellar at the time of the structure's abandonment. Given the lack of cross-mends from DUs 58B and 58C, within the old parsonage cellar, to contexts representing yard deposits outside the structure, there is no evidence that the cellar deposits were originally deposited in the open yard area.

DU 58D is the only other spatially and temporally well-defined depositional unit present on Lot 58. It includes the rubble-filled cellar deposit of the G. W. Baker Machine Company. The west wall of this cellar was defined by Feature 3/9. Contexts assigned to this DU include levels east of Feature 3/9 from Units N65/E60 and N80/E60 as well as a few stray finds collected from Backhoe Trenches 7 and 8. All diagnostic bottle glass recovered from the deposit dates to the twentieth century. The datable ceramics from the deposit include trailed red earthenware (1670-1850), plain creamware (1762-1820), plain whiteware (1820-present), blue transfer-printed whiteware (1820-1915), sponged pearlware (1820-1840), decaled hard paste porcelain (1830-present), "hotel" china (1860-present), and various gilded and decal-gilded hard paste porcelains (1885-present). The date ranges indicated by the ceramics suggest that the DU 58D deposit includes an admixture of nineteenth-century and possibly eighteenth-century yard deposits in addition to the twentieth-century building demolition rubble. Historically, the deposit is probably directly related to the circa-1943 structural demolition/parking lot construction event (Cunningham et al. 1984:135). The lack of ceramics dating from the early to mid-eighteenth century (i.e., delft, white salt-glazed stoneware, etc.) in DU 58D suggests that the building demolition/parking lot construction event did not disturb the deposits within the cellar of the old parsonage.

Finally, DU 58E includes yard contexts found in areas outside of the two cellars defined by Features 2, 12 and 3/9. Selected levels from units N22/E60, N50/E50, N80/E50 and N80/E60 have been assigned to this DU. Relatively little material was recovered from the few contexts associated with this depositional unit. The datable ceramics suggest that these contexts include material from the entire occupational history of Lot 58, from the eighteenth century to the mid-twentieth century. The diagnostic ceramics include trailed red earthenware (1670-1850), buff/yellow-bodied earthenware (1670-1795), white salt glazed stoneware (1720-1805), plain creamware (1762-1820), plain and shell-edged pearlware (1780-1840), plain and transfer-printed whiteware (post-1820) and buff-bodied, Bristol slipped stoneware (post-1835). No datable bottle glass or other artifacts were identified in the DU 58E assemblage.

In summary, the depositional units for Lot 58 were defined with the principal goal of isolating the eighteenth-century deposits that had remained undisturbed by later occupations. Both DUs 58B and 58C represent well-preserved eighteenth-century deposits, and they are distinguished by the character of the soil matrices. Depositional Unit 58A is dominated by eighteenth-century artifacts, including an appreciable number of sherds that cross-mend to DUs 58B and 58C (see Table 8). Doubtless, many of the other artifacts from contexts assigned to DU 58A originated in the old parsonage cellar, but because all contexts assigned to DU 58A have been disturbed by later occupation, attribution of these artifacts to the pre-1768 occupation is uncertain.

DU 58B includes contexts associated with Stratum B, a deposit consisting primarily of brick rubble and mortar that appears to represent the final demolition of the old parsonage. DU 58C represents the underlying refuse deposits beneath this brick and mortar layer. Whereas the DU 58B deposits were characterized by homogeneity of deposit matrix, DU 58C includes a wide variety of distinct deposit matrices that include mortar lenses, charcoal-bearing silts, etc. The relative homogeneity vs. variety of the deposit matrices suggest that the Stratum B brick and mortar layer (DU 58B) was formed by a single depositional event, whereas the underlying layers of DU 58C represent a series of depositional events that may have occurred gradually over time or during a relatively short interval. The larger number of ceramic vessel cross-mends between DUs 58B and 58C (Table 8) directly reflects the physical proximity of these deposits, and it may give evidence that the eighteenth-century cellar deposits were formed by a somewhat rapid series

of depositional events that culminated in the capping of the deposits by the brick/mortar layer of DU 58B.

Artifact pattern analysis of the depositional units (Table 9) points up a number of distinctions between the Lot 58 DUs. DU 58A, which contains a mixture of eighteenth-century, nineteenth-century and twentieth-century material, is quite similar in terms of ceramic content to the undisturbed eighteenth-century deposits; this is reflected in the narrow range of Mean Ceramic Dates for DUs 58A, 58B and 58C (see Table 6). Although the inclusion of nineteenth- and twentieth-century material in DU 58A is minimally reflected in the MCD, the presence of later material appears to be most markedly apparent by the proportion of bottle glass. Within the intact eighteenth-century deposits (DUs 58B and 58C), the ratio of ceramics to bottle glass ranges from 2:1 to 6:1, while this ratio is approximately 1:1 for DU 58A. The differing representation of bottle glass is also reflected in the "Kitchen-Other" class; this category is comprised entirely of unidentified curved glass, most of which is probably bottle glass, and it has a much higher representation in DU 58A than in DUs 58B and 58C. A marked increase in the representation of bottle glass has previously been observed as a phenomenon generally associated with late nineteenth-century assemblages (Louis Berger & Associates 1986b).

DU 58D is distinguished by the dominance of the Architectural Group, whereas the other DUs are dominated by the Kitchen Group. Although both DUs 58B and 58D have been interpreted as structural demolition events, they differ significantly in the representation of the Architectural Group. The dominance of Kitchen Group artifacts in DU 58B appears to reflect an admixture with underlying domestic refuse, while the lack of Kitchen Group artifacts in DU 58D appears to reflect the purely industrial character of Lot 58 during the early twentieth century. (Building materials--brick, mortar, wood, etc.--were sampled rather than collected on a 100% basis during excavation; building materials are not included in the artifact pattern analysis.)

3. Lot 4

All materials from Lot 4 were recovered from two adjacent test squares (Test Units 1 and 2). Most of the excavated area had been disturbed by looting or recent structural demolition, and DU 4A was defined to include the disturbed contexts in both units. The remainder of the excavation contexts represent relatively intact yard soils or intact features, and these have been assigned to DU 4B. A few intact features (postholes and a brick feature) were identified during excavation, but each of these contained too few artifacts to warrant definition of separate depositional units. Although there is general similarity in the assemblages from both Lot 4 DUs, the majority of the material was recovered from disturbed contexts (see Table 9). Dating analyses indicate that DU 4B represents a mid- to late nineteenth-century deposit, while DU 4B contains a mixture of late nineteenth- and twentieth-century material.

Both Lot 4 DUs are dominated by Kitchen Group artifacts, a fact that appears to reflect the residential use of Lot 4 throughout its occupation. However, industrial refuse was recovered from Lot 4, specifically kiln furniture and wasters associated with the William Hare Pottery.

TABLE 9. ARTIFACT PATTERN ANALYSIS BY DEPOSITIONAL UNITS.

ARTIFACT GROUP/CLASS	58A	58B	58C	58D	58E	4A	4B	TOTAL
KITCHEN								
Ceramics	1083	292	1232	31	37	303	83	3061
Bottles	1204	128	217	160	33	52	9	1803
Tumblers/Wine Glasses	20	8	38	.	.	.	.	66
Misc. Glassware	20	.	4	1	.	.	.	25
Tableware	.	.	10	.	.	.	.	10
Kitchen-Other	636	16	47	100	19	35	.	853
SUB-TOTAL	2963	444	1548	292	89	390	92	5818
ARCHITECTURAL								
Window Glass, Caming, Etc.	585	19	496	473	24	57	6	1660
Nails, Spikes, Etc.	99	7	103	44	8	15	1	277
Door Parts	1	1	2	.	.	.	.	4
Plumbing	9	.	.	3	.	.	.	12
Decorative Elements	1	.	.	.	.	1	.	2
Architecture-Other	10	.	.	.	1	.	.	11
SUB-TOTAL	705	27	601	520	33	73	7	1966
FURNISHINGS	5	0	4	0	2	0	0	11
ARMS	5	1	4	0	0	0	0	10
CLOTHING	13	2	7	2	2	3	0	29
PERSONAL								
Coins	1	1	.	.	.	.	.	2
Keys	2	.	.	.	.	.	.	2
Jewelry	2	.	2	1	.	2	.	7
Hygiene/Personal Care	.	.	.	.	.	1	.	1
Pharmaceutical	16	1	53	2	.	1	.	73
Cosmetic	.	.	.	3	.	.	.	3
Personal-Other	.	.	30	.	.	.	.	30
SUB-TOTAL	21	2	85	6	0	4	0	118
TOBACCO PIPES	28	12	83	1	2	2	1	129
ACTIVITIES								
Household Related	5	.	6	1	.	5	1	18
Toys	2	.	.	.	.	.	.	2
Hand Tools	.	.	1	1	.	.	.	2
Sewing Related	.	.	1	.	.	.	.	1
Manufacturing-By-Products	2	.	.	.	.	.	.	2
Kiln-Related	.	.	.	.	.	20	15	35
Barrel Related	1	.	.	.	.	.	.	1
Activities-Other	10	.	1	.	.	.	1	12
SUB-TOTAL	20	0	9	2	0	25	17	73
				1				
GRAND TOTAL	3760	488	2341	823	128	497	117	8154

Note: Items omitted from table include building materials, heating by-products, shell, bone and seeds.

C. DESCRIPTION OF ARTIFACTS

1. Ceramics

a. The Eighteenth Century Parsonage Deposits

Based on the date ranges of the recovered ceramics, the artifacts from Depositional Units (DUs) 58B and 58C, and most of those from DU 58A, can be associated with the mid-eighteenth-century occupation of lot by the parsonage of the Swedish Lutheran Church. The ceramics include domestically produced red earthenwares and slipwares, as well as refined stonewares and earthenwares from England and Chinese porcelains. The assemblage dates between 1740 and 1760/65 and consists of tea and tablewares, vessels used for preparing foods and milkpans. Table 10 contains a summary of the ceramic vessels recovered from these DUs, while more detailed information pertaining to the ceramic vessels is included in Appendices G and H.

1760/65 is the probable end date for the assemblage, since no creamwares are present. Creamware (or Queen's ware) was perfected by Josiah Wedgwood in the early 1760s, but it was probably not available in the American colonies until later in the decade and did not become common until the 1770s (Noel Hume 1973:227-229). 1740 is the manufacturing TPQ (Terminus Post Quem), based upon the presence of white salt glazed plates with molded decorations (Mountford 1973:205). However, two small sherds from a white salt glazed plate with the "King of Prussia" motif, which dates post-1757 (Noel Hume 1978:24) were found in the disturbed deposit, DU 58A; no cross-mends were found between these sherds and any sherds in DUs 58B and 58C, but it is quite possible that these sherds represent the TPQ for the DU 58B and DU 58C deposits. Additional support for a late 1750s TPQ is the presence of a clouded-glazed teapot (Vessel 38) in DU 58C, as Noel Hume (1978:25) states that clouded-glaze wares were not present in America before the mid-1750s. Since the old parsonage was torn down in 1768, and since the artifacts are a domestic assemblage, it is likely that they represent some of the ceramic vessels that were present in the old parsonage, which had been used as a kitchen and storeroom, at the time of its demolition. As far as can be determined, the old parsonage was deliberately demolished, so it may be assumed that the artifacts beneath and within the demolition layer (DUs 58C, 58B and most of 58A) represent an accumulation of in situ refuse (Schiffer 1972) or items that were discarded at that time, i.e, secondary refuse.

The red earthenwares in the old parsonage are characteristic of Lower Delaware Valley assemblages during the period 1740 to 1760 (Ellen Denker, personal communication 1987). One group of vessels--black glazed milk pans, and dark brown/black glazed chamber pots as well as bowls and other kitchen associated ceramics--were probably made in Wilmington or nearby, but the particular maker or makers cannot be identified. (Denker, personal communication 1987; Spiegel 1987; Thomas et al. 1985).

At least 11 milk pans (Plate 1 and Figure 20) were present, ranging from approximately 15 to 17 inches in diameter. The milk pans appear to have been constructed in two parts: a flat, disk-shaped piece of clay approximately 5/16-inch thick formed the base and a separate thrown cylinder was attached as the body. The seam line where they joined was worked together by hand. The vessels were apparently fired resting on their rims, probably to minimize stress on the relatively thin bases. This reconstruction is suggested by the consistent thickness of the bases, the lack of evidence for trimming of the bases, and the glaze flow patterns. The bottoms of the vessels are rough and unsmoothed, and the bodies have prominent turn rings. The large number of milk pans possibly indicates that the structure represented by Features 2 and 12 was used as a

TABLE 10. OLD PARSONAGE CERAMIC VESSEL ASSEMBLAGE.

VESSEL FORM/FUNCTION	COARSE EARTHENWARES		RED SLIPWARES			BUFF SLIPWARES	DELFT-WARES	OTHER REFINED EARTHENWARE	WHITE SALT GLAZED	ORIENTAL PORCELAIN	TOTAL
	Dk. brown/ Black Glazed	Other	General (Possibly Philadephia)	Philadelphia Petalled	Other						
Teawares											
Cups	.	.	.	.	.	.	.	.	2	9	11
Saucers	.	.	.	.	.	.	.	.	.	6	6
Tea Pots	.	.	.	.	.	.	.	3	.	1	4
Tablewares											
Plates	.	.	.	.	.	.	10	.	5	2	17
Porringers	1	.	.	.	.	.	.	.	.	.	1
Bowls*	.	.	.	3	1	.	2	.	2	.	8
Food Preparation,Service and Storage**											
Bowls*	2	.	1	.	.	.	.	.	.	.	3
Dishes***	.	.	12	1	.	2	.	.	.	.	15
Pitchers	1	.	.	.	.	.	.	.	.	.	1
Pipkins	1	.	.	.	.	.	.	.	.	.	1
Pans	.	.	2	.	.	.	.	.	.	.	2
Milkpans	11	.	.	.	.	.	.	.	.	.	11
Hygiene											
Chamber Pots	4	1	.	.	1	.	.	.	.	.	6
SUBTOTAL	20	1	15	4	2	2	12	3	9	18	86
Fragmentary											
Flatware	.	.	.	.	.	.	1	.	.	3	4
Hollowware	5	4	.	2	5	4	3	.	4	4	31
Unidentified	2	2	2	1	.		3	.	4	5	19
SUBTOTAL	7	6	2	3	5	4	7	0	8	12	54
GRAND TOTAL	27	7	17	7	7	6	19	3	17	30	140

Definition and determination of forms based on Beaudry et al. (1983), Towner (1963), Howard (1984), and others.

Source: all vessels assigned a vessel number and/or MNV from DUs 58A, 58B and 58C, except three nineteenth-century sherds from DU 58A.

* Bowls with refined or elaborately decorated bodies are included with tablewares; bowls with coarse bodies are included in food preparation.

** Multifunctional vessels.

*** A compromise name for "pie plates" with coggled edges used for cooking, serving and consuming foods.

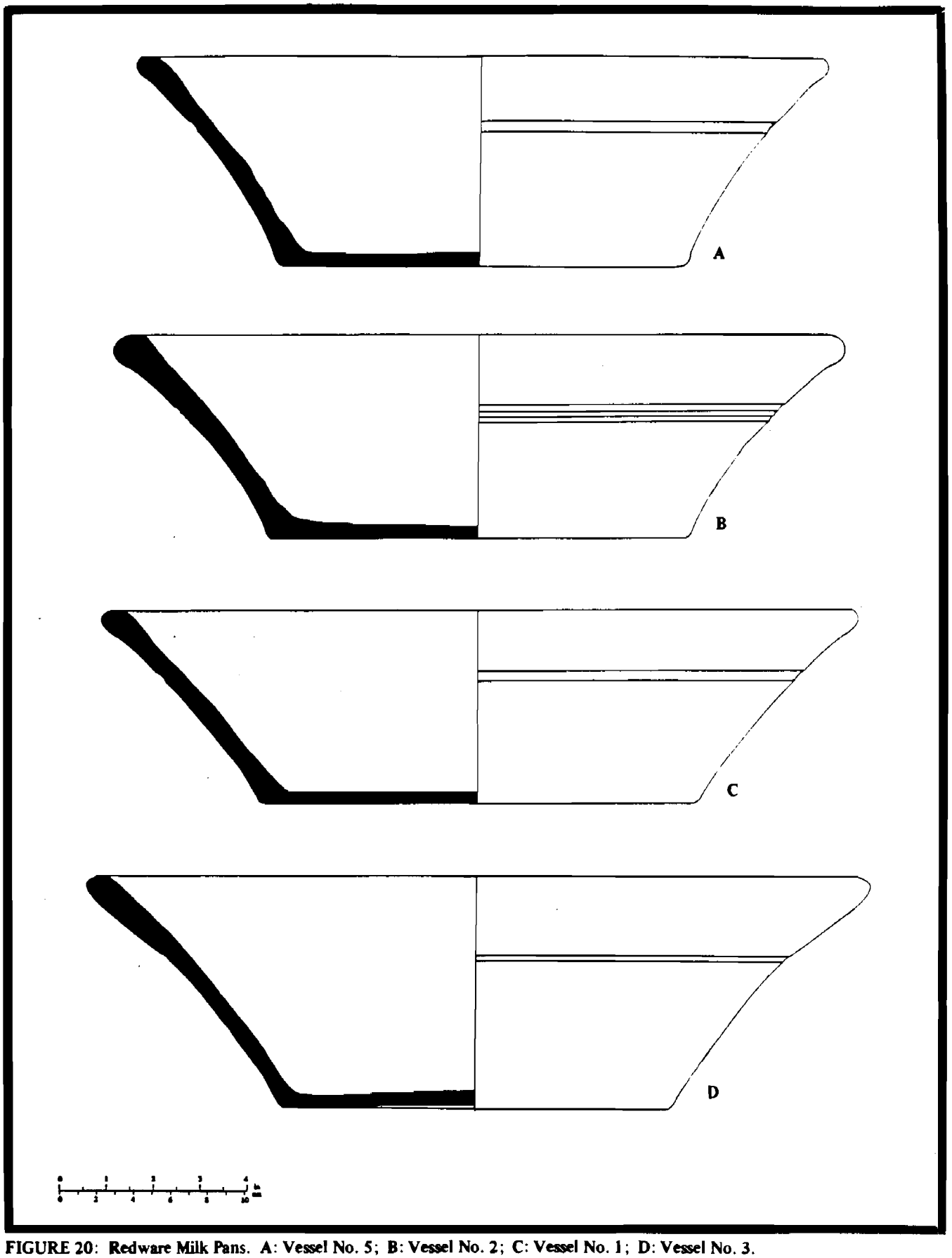

FIGURE 20: Redware Milk Pans. A: Vessel No. 5; B: Vessel No. 2; C: Vessel No. 1; D: Vessel No. 3.

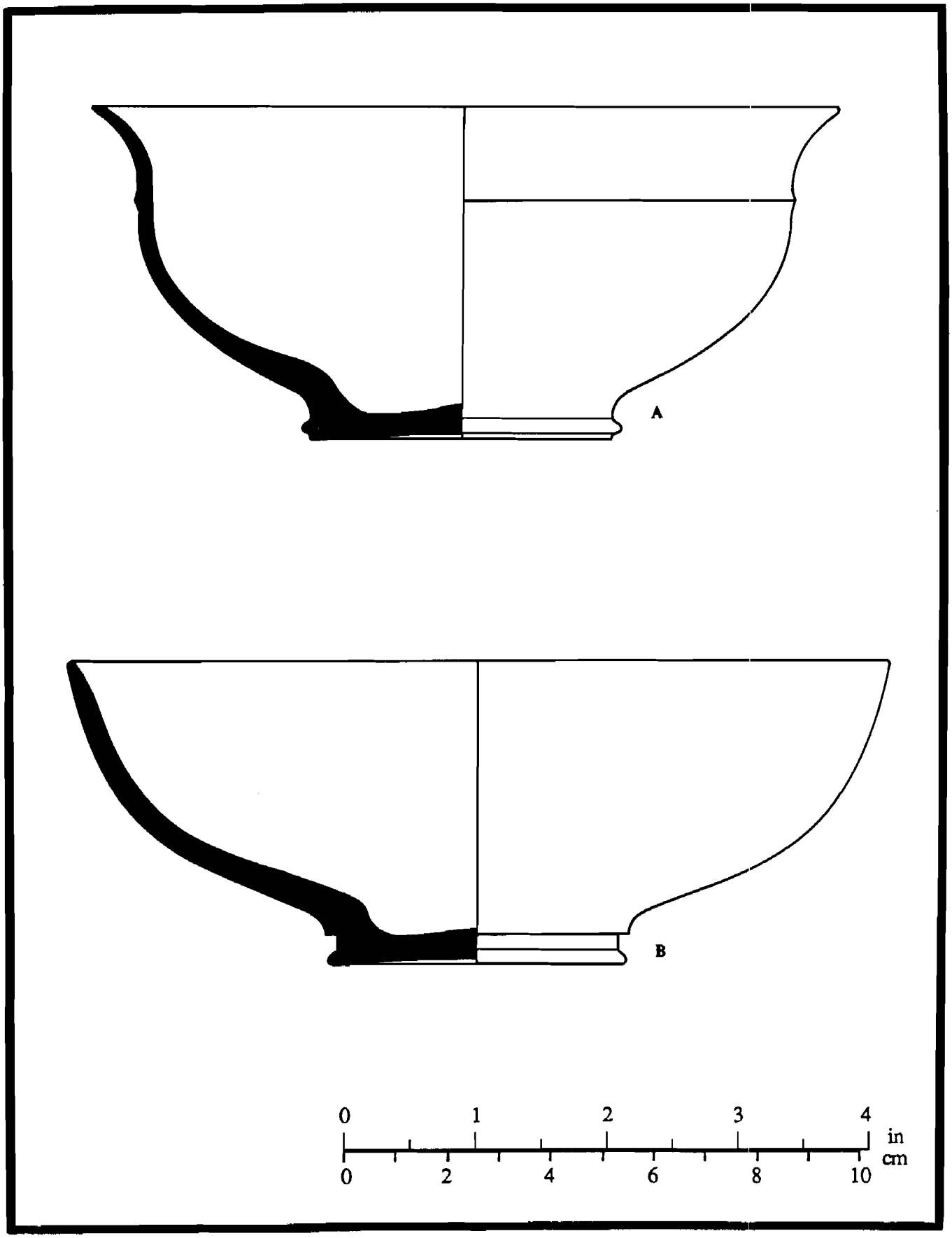

FIGURE 21: Philadelphia Redware Bowls. A: Vessel No. 17; B: Vessel No. 20.

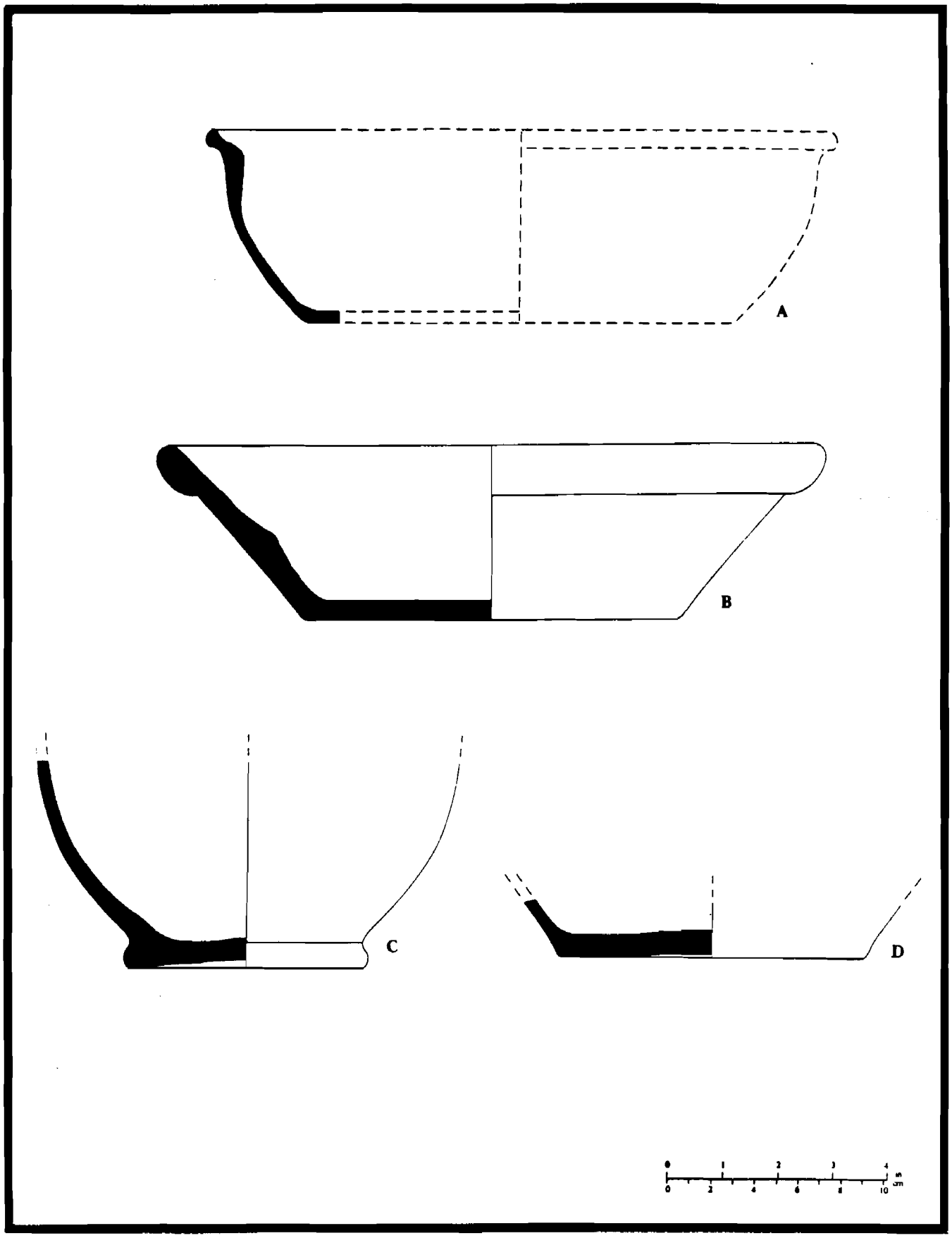

FIGURE 22: Redware Vessels. Lot 58. A: Vessel No. 22; B: Vessel No. 24; C: Vessel No.4; D: Vessel No. 30. A, B and D Are Slip Decorated.

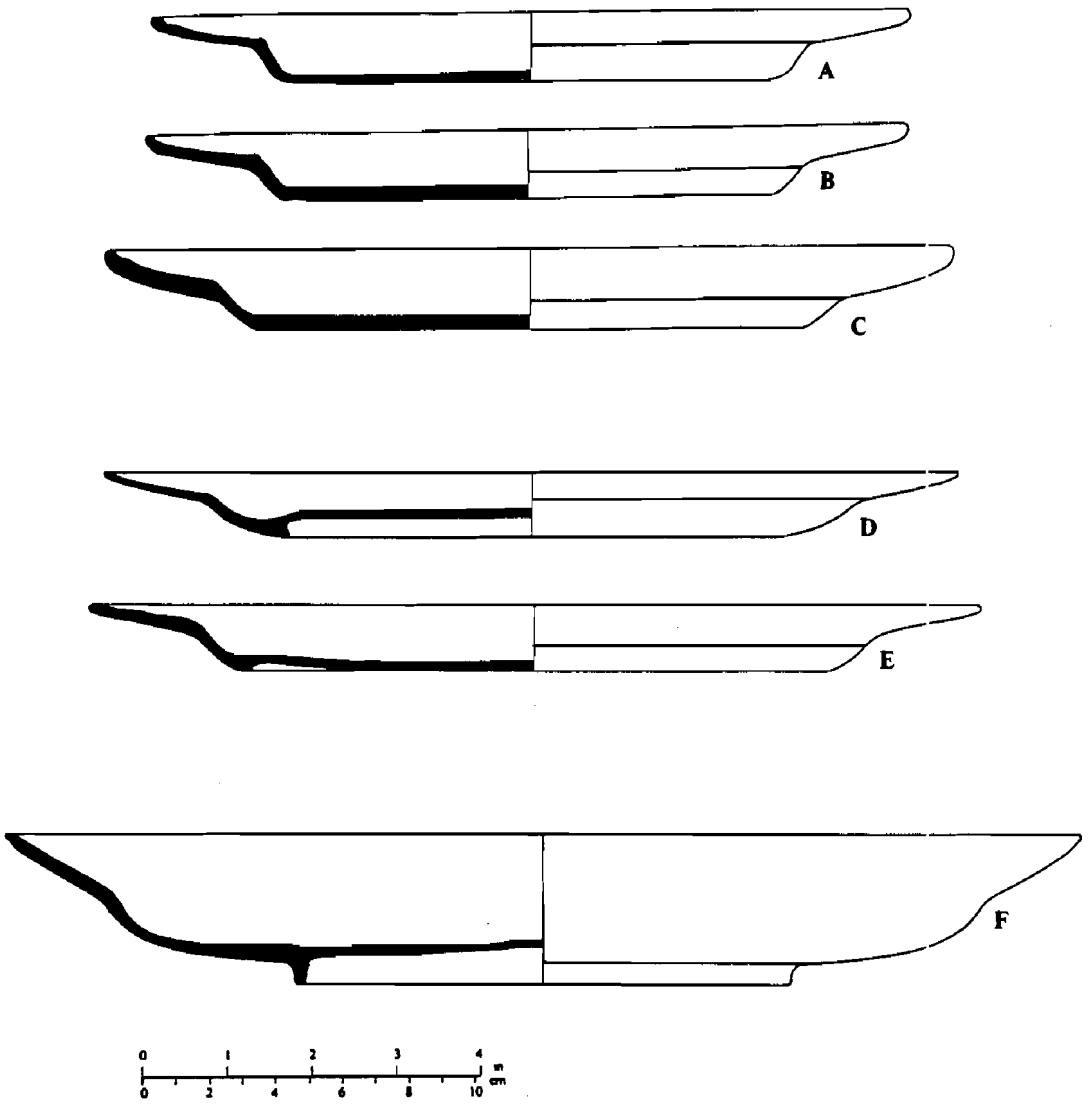

FIGURE 23: Plates. A: Vessel No. 39; B: Vessel No. 40; C: Vessel No. 43; D: Vessel No. 53; E: Vessel No. 66; F: Vessel No. 67. A-C: White Salt-Glazed; D:Porcelain; E-F: Delftware.

food processing area, or that it was a place to store vessels which were no longer in frequent use. The inclusion of the milk pans within and beneath the demolition rubble (DU 58B) makes the latter supposition more likely.

A second group of red earthenwares was probably manufactured in Philadelphia (Ellen Denker, personal communication 1987). It includes both plain and slip-decorated wares: the slip-decorated vessels are identifiable as Philadelphia products by the style of their decorations . The feet of the Philadelphia slip-decorated and plain bowls and chamber pots are a rather thick, circular pad of clay which, unlike most hollowware feet, is thinned on the interior of the vessel rather than on the foot itself (Figure 21:A, B; Figure 22:C). As a result, the interior of the vessel has a hollow or well at the center where glaze frequently pools quite thickly but unevenly. The feet also have a characteristic and distinctive slight flange (Figure 21). The plain vessels are glazed with either a yellow or a dark brown glaze. Both plain and decorated bowls are imitative of Oriental porcelain bowl shapes (which were also imitated by English makers of refined earthenwares) and indicate that the Philadelphia potters were producing shapes which could have the same functions as expensive imported ceramics.

The interiors of several Philadelphia shaped bowls, one dish, and three vessels which were too fragmentary to permit a determination of their form, were decorated with a white slip applied in a "petal" pattern in which slip is swirled on the interior to create petals or semi-circles (Plate 2). Various glazes are then applied over the slip. Vessel 20 (Figure 21:B), a 6 1/2-inch diameter bowl mending between DUs 58A and 58C, has a yellow glaze with dark brown streaks on the interior and the same glaze with dark brown blotches, probably applied with a brush, on the exterior. A 4-inch diameter bowl, Vessel 21, with one sherd from each depositional unit, has a similar glaze but is undecorated on the exterior while the interior has dark brown splotches. Vessel 22 (Figure 22:A and Plate 2), with sherds from three DUs, is a dish that was either intended to be oval or that warped extensively, and has green mottling and streaks over the petals with a very light yellow glaze. It is entirely unglazed on the exterior. This vessel also differs from the others in having a flat base without a foot and an inverted, fairly broad rim (Figure 22:A).

Another group of Philadelphia made, or at least Philadelphia style, red slipwares includes 12 slip-trailed dishes ("pie plates" with coggled rims), two pans and one bowl. They are decorated with bands of trailed slip colored over with green blotches and a yellow glaze (Plate 3) and are probably very similar to the "striped and clouded" vessels advertised by Jonathan Durrel, a Philadelphia potter who moved to New York (Gottesman 1954). Similar vessels were found in Gloucester City, New Jersey, where they were interpreted as having been brought in from Philadelphia (Thomas et al. 1985:IV-2), as well as in Philadelphia (Bower 1985:278-279; De Cunzo and Thatcher 1979:25-26; Liggett 1978:16-17) and New York City (Louis Berger & Associates 1987a). One pan, Vessel 30, with sherds from DUs 58A, 58B and 58C, has a design of multiple concentric circles (Figure 22:D and Plate 4) and has been identified as of Lower Delaware Valley manufacture by Denker (personal communication 1987). It is similar to vessels excavated in Philadelphia (De Cunzo and Thatcher 1979:26; Liggett 1978:29). Another pan, Vessel 24, from DUs 58A and 58C, has an intricate trailed design, partially colored green, and a unique, for this collection, rim profile (Figure 22:B). Denker (personal communication 1987) identifies this decoration as Pennsylvania German style, which is derived from both Northern European (German and Netherlandish) and British traditions.

The majority of the tin-glazed earthenwares (i.e., delftwares or faience) whose forms could be determined are plates (Figure 23). Most of them are too fragmentary to date by design, but

several can be given general date ranges. Vessel 34, mending between DUs 58A and 58C, is a 9-inch diameter plate with a chinoiserie design extending from the well onto the brim. It is similar to various plates illustrated in Archer (1973:Figures 131 and 132) and Garner (1948:passim) which are dated ca. 1730 to 1770 and manufactured in England. The profile and style of the foot ring of Vessel 66 (Figure 23:E), also a plate, is "common to all [English] potteries after 1730" (Garner 1948:38). It is possible that this vessel dates from relatively early in the eighteenth century, since its back is decorated with sketchy ovals and swirls, a characteristic feature of relatively early delftwares. The largest (ll-inch diameter) and most complete plate, Vessel 67 (Plate 5; Figure 23:F), has unfortunately lost most of its glaze, but the remainder shows a central design of a large basket filled with flowers. Its foot ring style is dated by Archer and Morgan (1977:126) to ca. 1710, but Garner (1948:38) dates a similar profile to Lambeth or Bristol, 1710-1750. The basket-with-flowers design is a common one on both porcelains and delftwares from the early and mid-eighteenth century.

Vessel 36 (DU 58A) is also a plate, but it is quite different in the overall color of the glaze, which is very white in contrast to the blue-tinted glazes of the other tin-glazed vessels, and in its scalloped rim. Archer (1973:93, 95) illustrates scalloped rim plates from Bristol dated 1760 and 1765, but the decoration on these plates does not resemble the sketchy floral motif on Vessel 36. Vessel 33 (DUs 58A and 58C) is a fragment of a plate with polychrome decoration using blue, green, purple and yellow (Plate 6). Archer and Morgan (1977:103) note that "from about 1750 and especially at Liverpool the complete range of polychrome was again used". The colors used on Vessel 33 resemble those illustrated in Archer and Morgan, and the style of the floral decoration is also similar to those attributed by the authors to Liverpool (Archer and Morgan: Figures 74 and 77). Vessel 35 (DUs 58B and 58C) is a 10-inch-diameter bowl decorated with a bold floral design in blue (Plate 7). This vessel is less than 25% complete and cannot be definitively dated by its decoration, but its general style identifies it as British and eighteenth-century.

The delftwares from the Old Parsonage assemblage are thus, as far as can be determined, tablewares manufactured in Great Britain. They could have been purchased locally or in Philadelphia, but it is also possible that they were obtained in Sweden and brought to Wilmington. Sweden had two delftware manufactories in the eighteenth century, but there is no evidence that any of the vessels in the present assemblage were manufactured in Sweden (Hernmarck 1979:142-145).

Other vessels with refined earthenware bodies are three teapots from DU 58C. Vessel 38 is a clouded-glaze early cream-colored pot, represented only by a spout (Plate 8) and a body fragment, and is of British manufacture. The other two vessels, Vessel 65 of refined agate ware (Plate 9; Figure 24), and a single Jackfield-type teapot sherd which did not receive a vessel number, were probably manufactured in Britain but possibly were made in Philadelphia. The agateware teapot is nearly 75% complete and is delicately made, with very thin walls.

Buff-bodied slipwares made in Staffordshire and other parts of England are thought to be characteristic of eighteenth-century North American assemblages, but they are relatively rare in this collection; only six vessels of this type were identified, and all were represented by only one or two sherds. The lack of this type of ware is most probably due to the use of Philadelphia and locally-made red slipwares for food preparation and serving. The Philadelphia earthenware potters worked mainly in the British tradition (Bower 1985:277) and produced forms which were functionally interchangeable with the more costly imports.

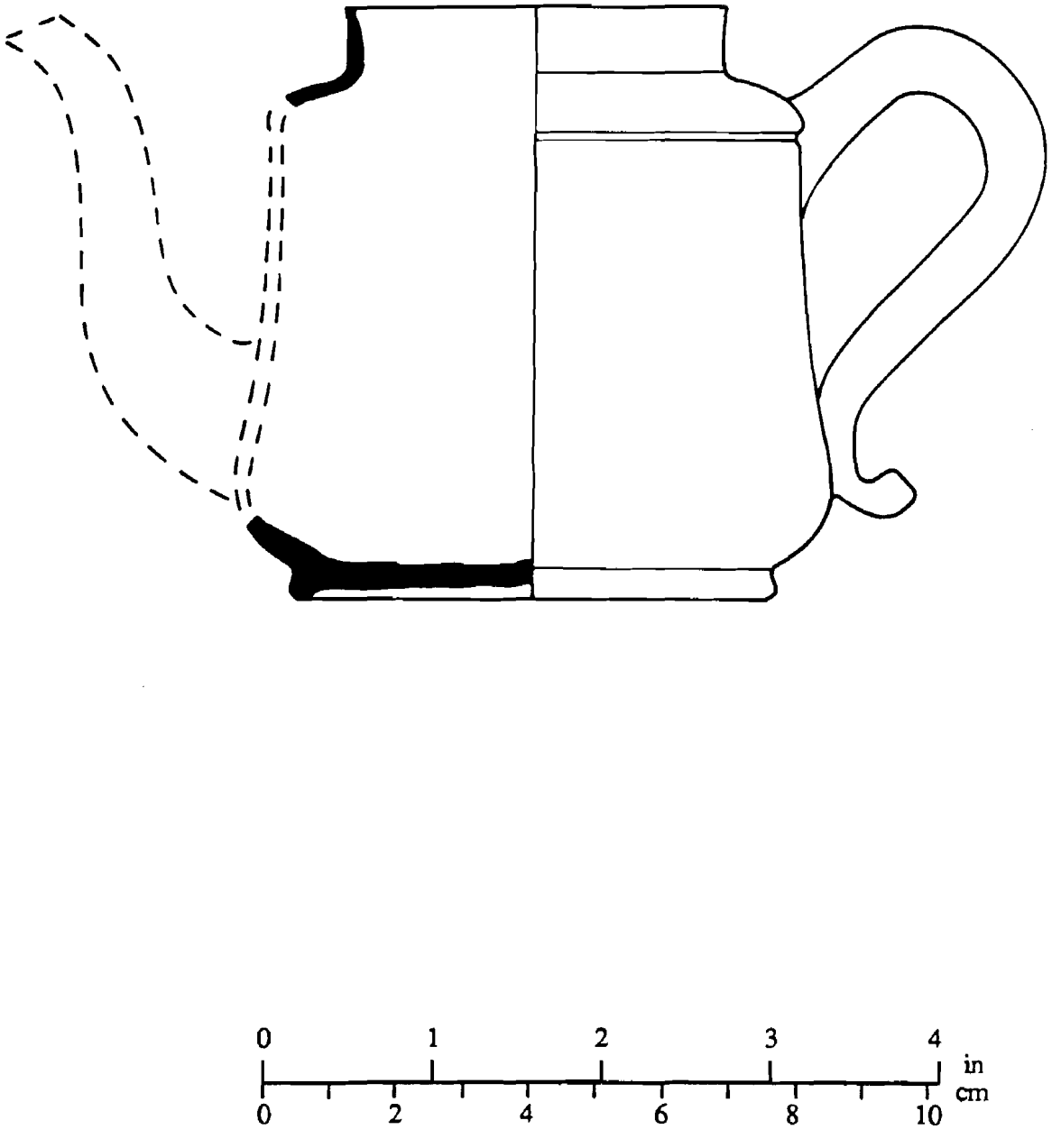

FIGURE 24: Refined Agateware Teapot (Vessel No. 65)

White salt-glazed tablewares were a type of ceramic which could not be duplicated by the local potters, and these stonewares were imported from England. A minimum of 17 vessels, including five plates (Plate 10), two cups and two bowls, were recovered from old parsonage deposits. The plates are probably slip cast with dot/diaper/basket and barley patterns and quite possibly came from different factories, since they have a variety of foot rings, or no foot rings at all (Figure 23:A, B, C). Another plate, represented by two sherds from DU 58A, has a small cannon, battle axe and drum which can be matched with one of the motifs on the "King of Prussia" rim pattern (Noel Hume 1978: Figure 1A). As noted above, this rim pattern post-dates 1757 when, on November 5, Frederick the Great of Prussia won a significant battle. British support for their ally was reflected in the production of this pattern (Noel Hume 1978). One of the white salt-glazed teacups is painted with overglaze enamels, and the other has a scratch-blue floral pattern. One of the bowls, Vessel 44 from DUs 58B and 58C, has a rather unusual flaring rim and a bold floral and line decoration (Plate 11). The other bowl is very fragmentary and without any decoration.

There is a minimum of 30 porcelain vessels from the deposits associated with the Parsonage; all are Chinese and most are teawares (Figures 25 and 26; Plate 12-15). The teawares can be divided into three groups based on their decorative techniques and styles. Within these groups, the decorative motifs are sufficiently similar to suggest that the teawares were purchased as, or at least functioned as, two or three matching sets: one cup and three saucers are decorated in overglaze polychrome colors (iron red, black, gilt and other colors which have disappeared in the ground) in landscapes with flowers, birds or insects which, while not identical to each other, are very similar (Plate 12). All of these vessels have thin, well-potted, grayish bodies with a light brown line around the rim, a feature which is not very common on overglaze decorated porcelains. One of the saucers, Vessel 51 (DUs 58A, 58B and 58C), has a distinctive design of odd-looking birds, possibly quails (Plate 12), which are similar to some underglaze blue birds on a saucer illustrated in Macintosh (1977:117). Macintosh states that these birds are imitative of mid-eighteenth century Meissen porcelain. Another saucer, Vessel 48 (DUs 58A and 58B), is decorated with various insects (Plate 12). Insects were a popular motif on Chinese porcelain, especially in the second and third quarter of the eighteenth century (Forbes 1982:16, 24, 29); Howard (1984: 63, D66) illustrates a similarly decorated plate dated ca. 1755.

Another possible set is represented by one or two identical tall tea bowls (Figure 25) and one or two saucers decorated in the Chinese Imari style with underglaze blue and overglaze red and gilt (Plate 13). These vessels (Vessels 52, 54 and 56) and a saucer fragment from DU 58C which was not assigned a vessel number, have rather symmetrical, simple floral designs.

Another possible set of blue decorated porcelain tea cups and saucers was dated by their designs to between 1720 and 1800, based on similarities to illustrated examples in Howard (1984). This is a conservative, wide time range, since styles of decoration on underglaze blue porcelains during the eighteenth century were fairly long-lived and were imitative of both earlier Ming styles and new European motifs. The three cups (Vessels 59, 60 and 61) have almost identical floral decorations with cross-hatched borders (Plate 14) and were almost certainly purchased together. The saucer does not have the identical floral motif seen on the cups, but its design of a floral landscape with two mandarin ducks has the same cross-hatched border. A lid fragment, probably to a teapot, also has a floral motif whose style is similar to the decorations on the tea cups. Similar designs are illustrated by Palmer (1976:48) and Schiffer (1980:195). Palmer dates her illustrated vessel 1700 to 1730, and the vessels shown in Schiffer were excavated from a mid-century context in Philadelphia and are described as typical of pre-Revolutionary Chinese export porcelains.

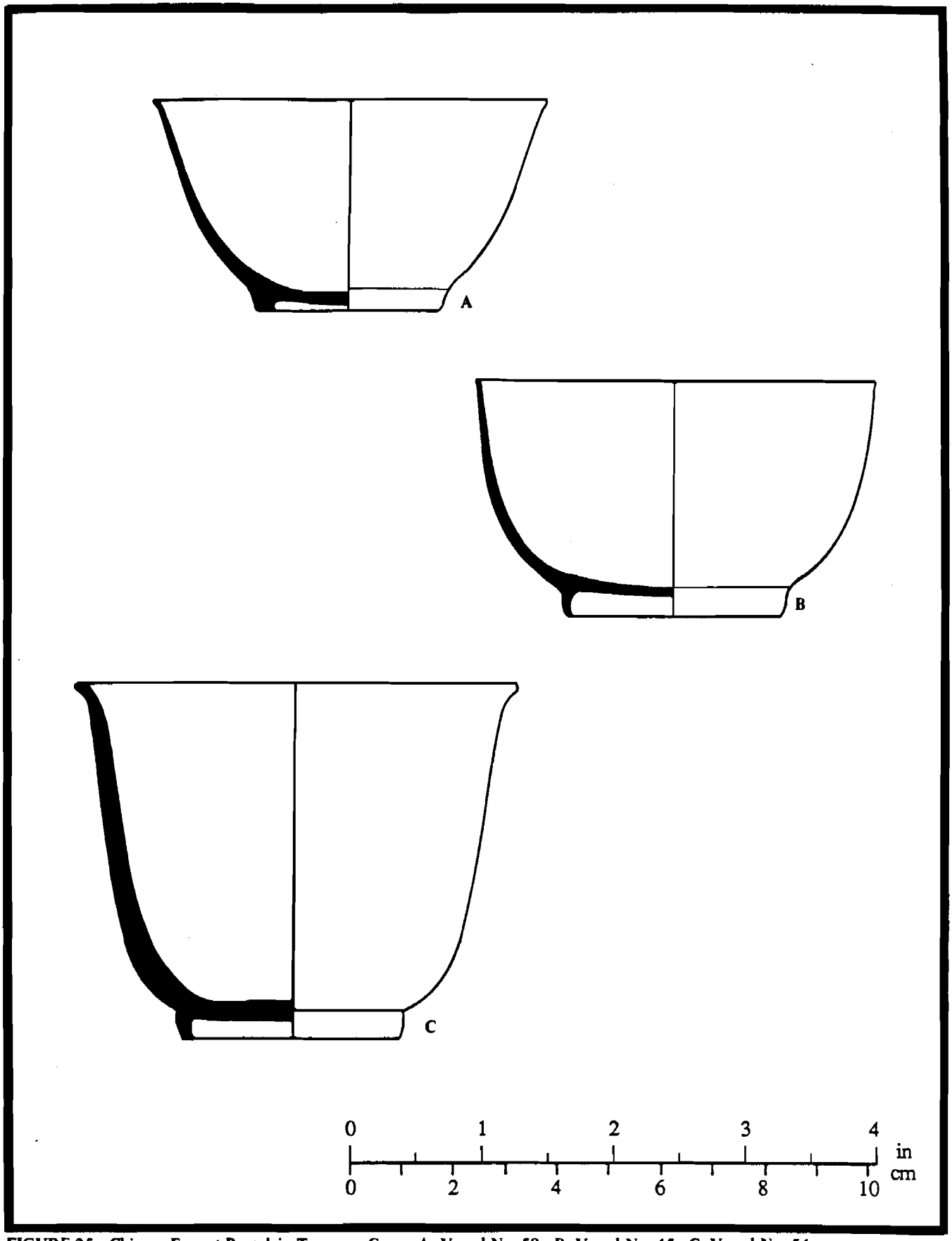

FIGURE 25: Chinese Export Porcelain Teawares-Cups. A: Vessel No. 59; B: Vessel No. 45; C: Vessel No. 54.

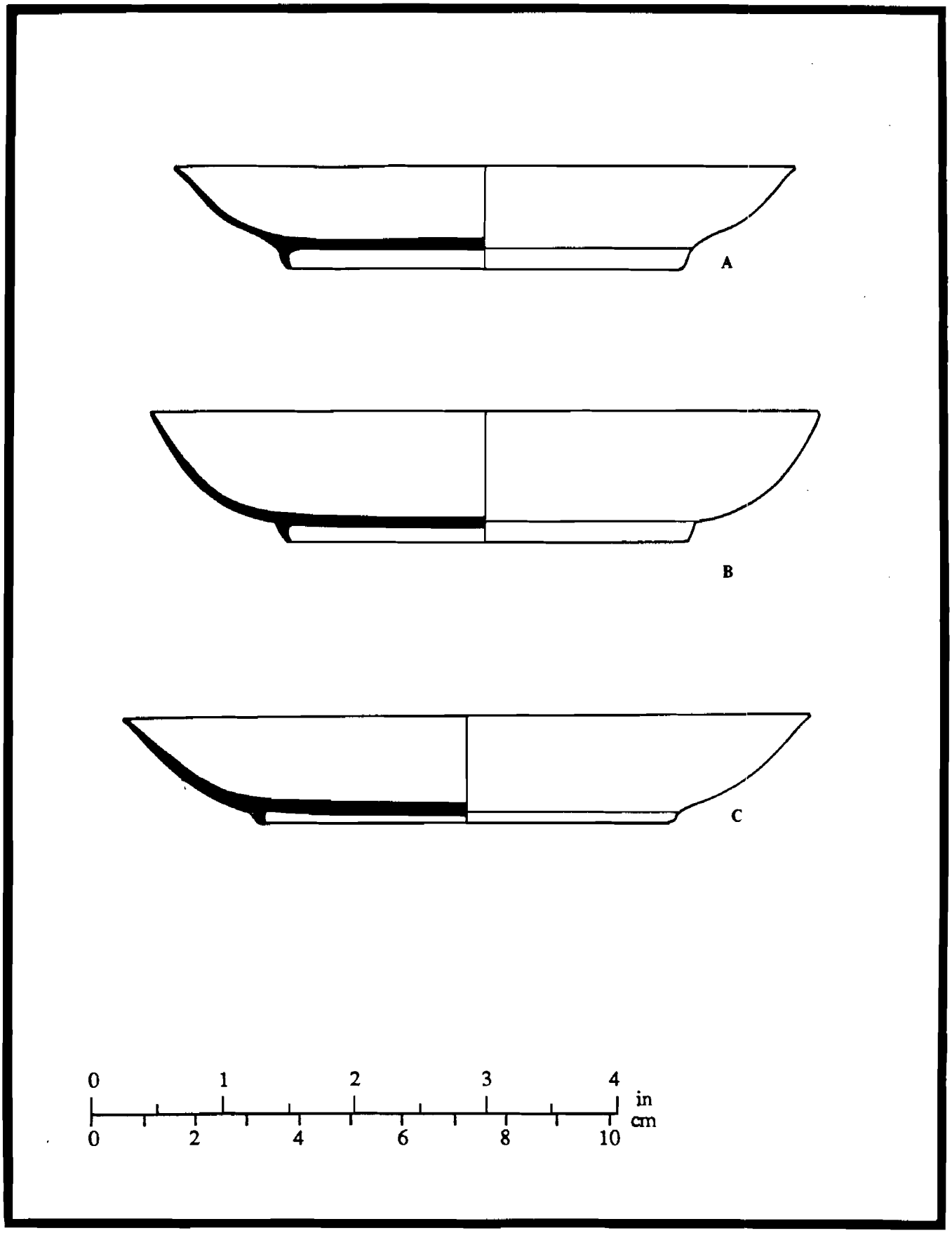

FIGURE 26: Chinese Export Porcelain Teawares-Saucers. A: Vessel No. 58; B: Vessel No. 51; C: Vessel No. 52.

There are also at least two plates decorated in underglaze blue. Both have decorations which were too incomplete to be dated; they are not in the same style as the motifs on the cups and saucer, but they are alike in being decorated with floral motifs rather than landscapes or water scenes. The presence of porcelain plates in the old parsonage assemblage probably indicates a relatively great expenditure on a socially visible class of ceramics.

The vessels in the Old Parsonage assemblage had varying amounts of cuts, abrasions, etc. from use. In general, the redwares all show moderate to heavy wear on their interiors and around their rims. Only one vessel (No. 18), showed no wear, but this is probably due to the small size of the remaining fragment. Wear on some of the slipwares could not be determined because the surfaces were too badly spalled. The other slipwares, with the exception of Vessel No. 30, show moderate to heavy wear. Vessel No. 30, a pan, exhibits no apparent wear, but only the base of this vessel was recovered.

Wear is often difficult to determine on delftwares since the glaze has a tendency to spall off. Most of the delftware vessels from Lot 58 were too fragmentary and/or spalled to indicate wear, but Vessel No. 33, a plate base, exhibited heavy wear on its foot ring, and Vessel No. 35, a bowl rim fragment, showed some wear along its rim.

White salt-glazed stoneware and porcelain are hard-bodied ceramics which are less likely to show wear. Most of the vessels made from these clays showed little or no wear, but this is probably due more to the nature of the bodies than to the lack of use.

The majority (45 of 65) of the vessels from Lot 58 were less than 25% complete, and an additional eight were less than 50% complete. Of the five vessels that were between 50 and 75% complete, one was a milk pan, one a Philadelphia petaled bowl, one a porcelain saucer, one a delftware plate, and one the agateware teapot. Seven vessels (two milk pans, one white salt-glazed stoneware plate, two porcelain cups, and two porcelain saucers) were more than 75% complete; .

b. Lot 4 - William Hare Pottery Kiln Ceramics

The ceramic assemblage from Lot 4 consisted primarily of stoneware and redware kiln furniture, kiln-damaged ceramics and kiln wasters believed to be from refuse associated with the William Hare Pottery kiln, which operated on Block 1184 during the period ca. 1838-1889. Although the ceramics were recovered from contexts that had been disturbed, the redware and stoneware wasters and kiln furniture may confidently be associated with the Hare Pottery. As such, the assemblage provides information concerning the types of vessels manufactured by the Hare Pottery as well as the firing techniques employed at the pottery.

Kiln furniture is a hand- or wheel-formed piece of clay used for stacking or separating vessels during firing. They may be pre-made before loading the kiln and reusable if not damaged; or they may be hand-formed at the time of kiln loading and discarded after firing. The various sizes, shapes and styles of kiln furniture are referred to as props, wedges, pads, saggers (saggars), setting tiles, spacers, spools and rim guards (Barka 1972; Webster 1971). Four of these types are present in the Lot 4 assemblage: wedges; rim guards; spacer or spool; and saggars (saggers).

Wedges are flattened rolls, hand-formed at the time of loading, which are placed beneath the vessel to prevent the base from sticking. Wedges were the most common form recognized in the assemblage, and a total of 17 was identified. They range between two and four inches in length, and some had a grit or sand covering to prevent or reduce sticking. The sample exhibits a wide variety of clay bodies, including redwares, stonewares or a mixture of both, with colors ranging from buff to reddish orange and dark gray. The wedges also varied in the amount of overfiring or underfiring and in the amount of glazing. Both salt glazing and Albany slip glazes were used. A reconstructed salt-glazed stoneware pitcher (Vessel No. 74) recovered from Lot 4 exhibits three reddish tinted outlines on its base, that appear to correspond to the size and color of some of the wedges in the assemblage.

One rim guard was recovered. It is a small wad of clay, hand-formed at the time of loading and pressed onto the rim of the vessel to protect the rim from accidental contact with another vessel. The piece measures approximately one inch in length, with a redware body and a trace of Albany slip glaze.

One spacer or spool is present, measuring approximately 2.75 inches in length, with a buff color and no glaze. It is a small roll of clay, hand-formed at the time of loading and flattened along one side as a result of having been placed between two upright vessel bodies.

Saggars or saggers are pre-made, wheel-thrown forms used to separate stacked vessels. They are cylindrical with a semi-circular cut-out extending from the rim on the body to accommodate handles and a bottom/top with a circular cut-out. A fragmentary specimen measures approximately three inches high and five inches in diameter; it is heavily glazed, green, from salt firings with a gray stoneware body that has grit on the bottom and an impression from a wedge. There are also fragments of a grit-covered redware rim guard that is similar to saggars from a Tennessee kiln dated circa 1870 (Greer 1981:221).

The Lot 4 ceramic assemblage also includes a few kiln-damaged glazed redwares and salt-glazed stonewares that were discarded due to defects from firing. The bodies of the damaged ceramics are generally of the same color and texture as the kiln furniture, and they exhibit varying degrees of ash deposit, underfiring, overfiring, uneven firing and foot breakage that resulted from glaze fusing to the base of the vessel. A few kiln wasters were also recovered. These items represent waste products resulting from breakage during firing, and they were mostly conglomerations of ceramic, glaze, and ash of the same type as the kiln furniture and damaged ceramics.

Vessels 74 and 75 appear to be associated with the Hare Pottery, as both apparently were damaged in the process of firing. Vessel 74 (Figure 27) is the bottom two-thirds of a gray stoneware pitcher or large jug. The vessel has what appears to be an ash deposit on the interior and exterior, and it probably cracked in the kiln. The body is gray with some red areas, most noticeably on the base where the marks of three wedges can be seen. The interior has an Albany slip. The decoration on the vessel--a large scale, simple floral/leaf band just below the widest part of the body--resembles some Alexandria designs (Denker and Denker 1985:102, Figure 16.12; ca. 1825-1841) and some other unattributed mid-nineteenth century pieces (Webster 1971:78). Vessel 75 (Figure 28) is a redware wide-mouthed jar with a wide, flattened rim and a body which tapers slightly toward the base. It is decorated with faint streaks of dark brown under a brown glaze with dark brown speckles. A portion of the rim appears to have cracked off while in the kiln.

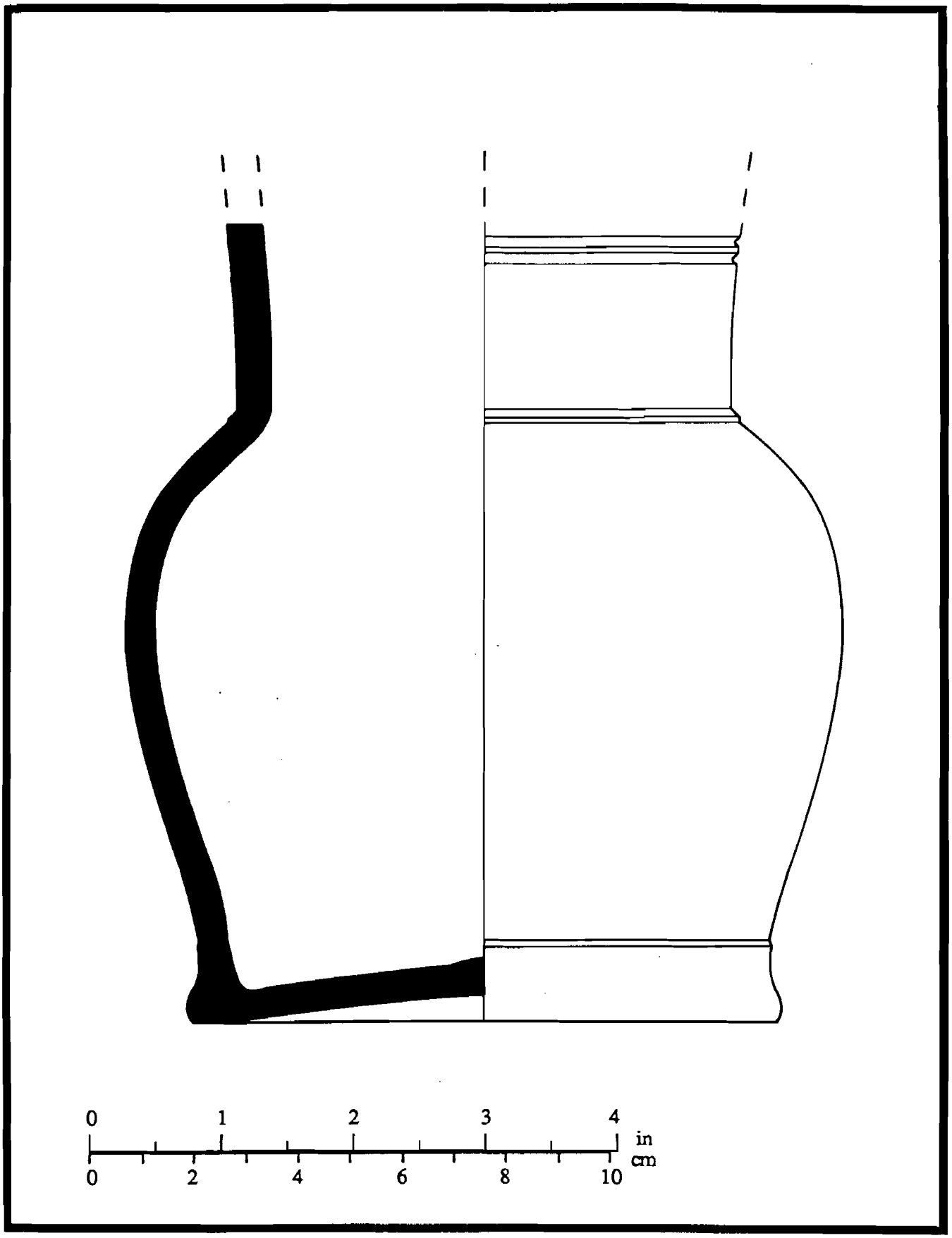

FIGURE 27: Gray Salt Glazed Stoneware Pitcher (Vessel No. 74).

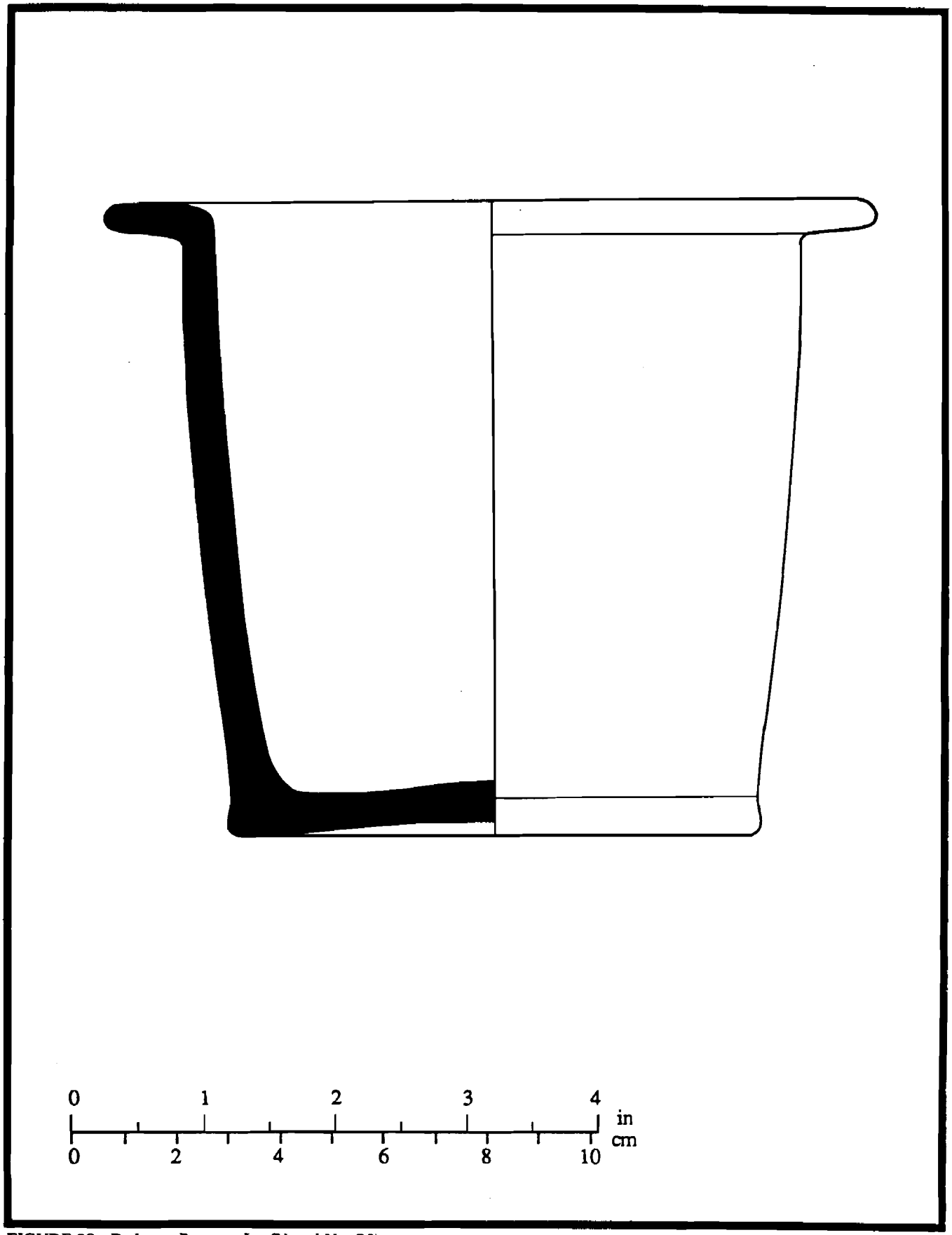

FIGURE 28: Redware Preserve Jar (Vessel No. 75).

Other vessels identified in the Lot 4 assemblage include two redware milk pans (Vessels 69 and 71), two miscellaneous redware hollowware forms (Vessels 68 and 73), a stoneware small-mouth jar (Vessel 72), and an unidentifiable stoneware form (Vessel 70).

2. Glass Vessels--Bottles, Drinking Vessels and Tablewares

The collection includes a total of 2,853 glass bottle, drinking vessel and tableware sherds (Table 11). The glass assemblage associated with the Parsonage Lot is extremely fragmentary, and there are no intact or fully reconstructible vessels in the collection. Of the 31 vessels identified, 18 are bottles, 12 are tablewares, and one is classified as "other." The identified glass vessels are discussed below, according to functional groups, and listed in Table 12 according to depositional unit where the MNV was assigned. Appendix I provides more detailed information for each glass vessel.

Wine/Liquor Bottles. Twelve vessels, represented exclusively by bases, and one vessel represented by a finish, are functionally inclusive in the wine/liquor bottle category. Of the 12 wine/liquor bottle bases, all appear to be distinctly English in shape by virtue of their bulging heels and uneven resting surfaces, features which are characteristic of bottles manufactured in England during the period from ca. 1740 to the 1820s (Jones and Sullivan 1985:85). Ten of the bases appear to have been attached to a sand pontil for finishing. Roughly datable to the mid-eighteenth century (Jones 1971:69-70), they exhibit a circular, slightly impressed area of embedded sand grains and glass chips, the majority of which begin approximately half-way up their dome-shaped push-ups. Two bases, roughly datable to the same period (Jones 1971:66; see also Noel Hume 1961:100-101), exhibit a quatrefoil impression in addition to their sand pontil marks.

TABLE 11. GLASS TYPES BY DEPOSITIONAL UNITS.

GLASS TYPE	58A		58B		58C		58D		58E		4A		4B		TOTAL	
BOTTLE GLASS																
Alcoholic Bev.	500	26%	90	59%	127	33%	16	6%	0	0%	2	2%	0	0%	735	26%
Carbonated Bev.	0	0%	0	0%	0	0%	0	0%	0	0%	2	2%	1	11%	3	0%
Other Beverage	64	3%	0	0%	0	0%	5	2%	1	2%	7	8%	3	33%	80	3%
Food	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	0%
Pharmaceutical	16	1%	1	1%	83	21%	5	2%	0	0%	1	1%	0	0%	106	4%
Misc. Bottle	6	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	6	0%
Unident. Bottle	632	33%	38	25%	90	23%	139	52%	32	62%	41	47%	5	56%	977	34%
SUB-TOTAL	1220	64%	129	84%	300	77%	165	62%	33	63%	53	60%	9	100%	1909	67%
TABLE GLASS																
Mugs, Cups, Etc.	0	0%	0	0%	11	3%	0	0%	0	0%	0	0%	0	0%	11	0%
Stemware	8	0%	0	0%	3	1%	0	0%	0	0%	0	0%	0	0%	11	0%
Tumblers	10	1%	8	5%	18	5%	0	0%	0	0%	0	0%	0	0%	36	1%
Miscellaneous	0	0%	0	0%	3	1%	0	0%	0	0%	0	0%	0	0%	3	0%
Unident. Table	22	1%	0	0%	7	2%	1	0%	0	0%	0	0%	0	0%	30	1%
SUB-TOTAL	40	2%	8	5%	42	11%	1	0%	0	0%	0	0%	0	0%	91	3%
OTHER GLASS																
Unidentifiable	636	34%	16	10%	47	12%	100	38%	19	37%	35	40%	0	0%	853	30%
COLUMN TOTALS	1896		153		389		266		52		88		9		2853	

Note: architectural glass excluded from table.

TABLE 12. SUMMARY OF GLASS VESSELS (MNV) BY DEPOSITIONAL UNITS.

FUNCTIONAL VESSEL TYPE	DEPOSITIONAL UNITS 58A	58B	58C	CATEGORY TOTAL
Wine/Liquor Bottle	10	2	1	13
Pharmaceutical Bottle	.	.	2	2
Miscellaneous Bottle	1	1	1	3
Drinking Vessel, Stemware	1	.	.	1
Drinking Vessel, Non-Stemware	.	1	5	6
Miscellaneous Tableware	4	.	1	5
Unassigned	.	.	1	1
COLUMN TOTALS	16	4	11	31

Note: identification of glass vessels was restricted to DUs 58A, 58B and 58C.

Only two of the bottles (Vessels 10 and 11) were recovered from undisturbed eighteenth-century contexts (DUs 58B and 58C). The other ten were recovered from disturbed contexts on Lot 58 (DU 58A). Five wine/liquor bottles (Vessels 1-5) were recovered from the base of the looter's pit (Feature 7), and the remainder (Vessels 6-9 and 12) were recovered from the Stratum A deposit and Strata A/B interface Figure 29 illustrates profiles of the wine/liquor bottle bases recovered from Lot 58.

The final vessel in the wine/liquor category is a case bottle (Vessel 13), represented by an olive green finish with a flared, folded-out lip, which was recovered from the undisturbed eighteenth-century deposits (DU 58C).

Pharmaceutical Bottles. Two vessels are included in the pharmaceutical bottle functional category. Both were recovered from undisturbed eighteenth-century contexts (DU 58C). Vessel 14 is an olive green snuff bottle represented by a partial base (either square or rectangular in shape) of an indeterminate type. A flated lip finish, also recovered from DU 58C, is probably associated with this vessel. Vessel 15, a cylindrical aquamarine vial, is represented by a base exhibiting a solid (or glass-tipped) pontil mark and conical push-up.

Miscellaneous Bottles. Three functionally unidentified bottles are included in this category. Two (Vessels 16 and 17) were recovered from undisturbed eighteenth-century contexts (DUs 58B and 58C), while the other (Vessel 18) was recovered from a disturbed context on Lot 58 (DU 58A). Vessel 16, represented by an intact olive green base of an indeterminate type, which may be either a square snuff or case bottle. Vessel 17 is represented by an emerald green/teal rectangular base fragment of an indeterminate type. Vessel 18 is represented by an olive green, thin-walled cylindrical base fragment with an unidentifiable push-up profile.

Drinking Vessels/Stemwares. One colorless stemware drinking vessel (Vessel 19), represented by a bowl rim, is included in this category. Its curvature suggests a trumpet, waisted or bell-shaped form. The bowl rim sherds assigned to this vessel were recovered from a disturbed context (DU 58A), but additional rim fragments and a stem possibly associated with this vessel were recovered from the intact eighteenth-century deposits (DU 58C).

Drinking Vessels/Non-Stemwares. Six vessels, including one mug and five tumblers, are included in this category. These vessels, represented predominantly by bases with solid (or glass-tipped pontil marks, were recovered from undisturbed eighteenth-century contexts (DUs

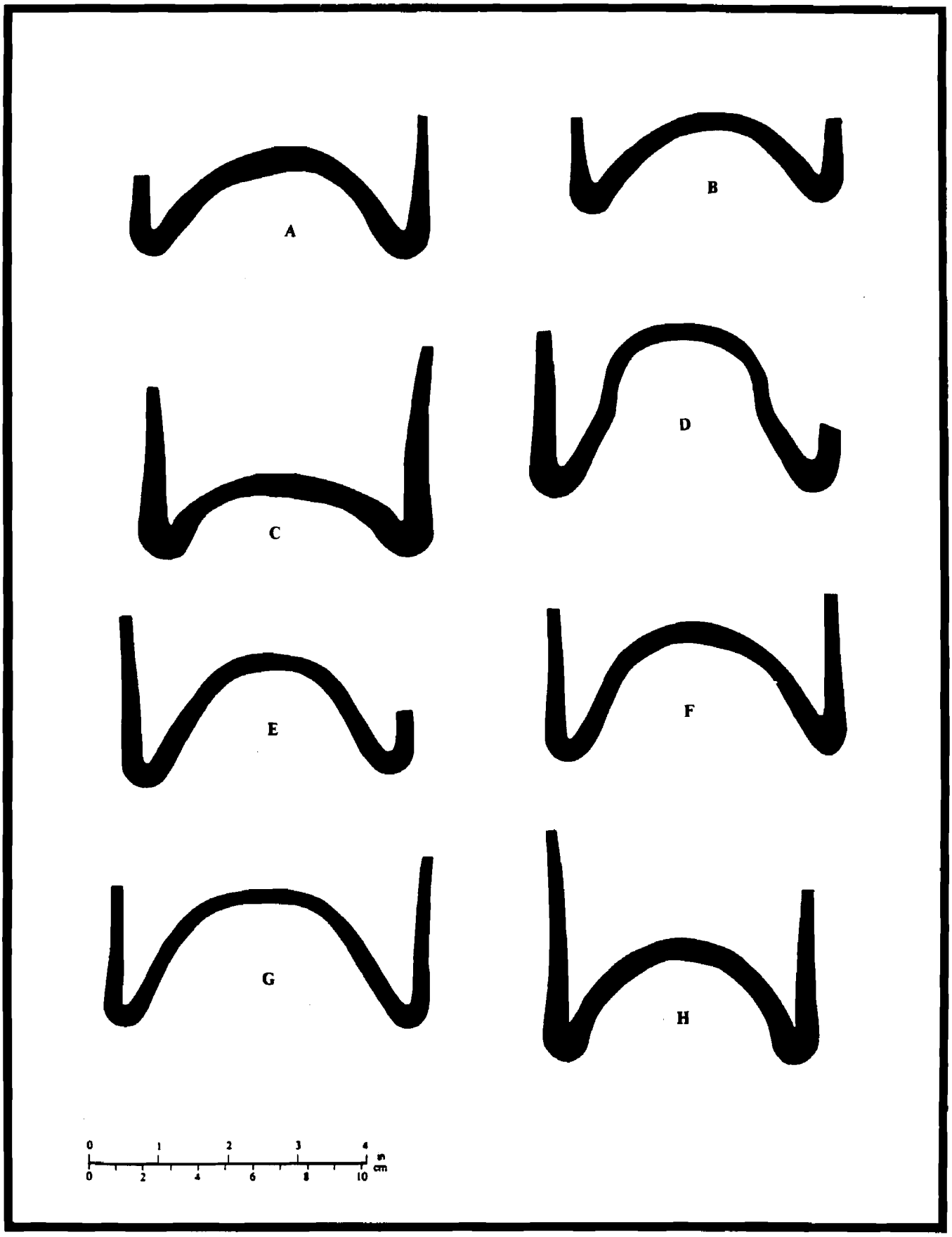

FIGURE 29: Selected Wine/Liquor Bottle Base Profiles. A: Vessel No. 2; B: Vessel No. 8; C: Vessel No. 1; D: Vessel No. 4; E: Vessel No. 5; F: Vessel No. 10; G: Vessel No. 9; H: Vessel No. 3.

58B and 58C). Vessel 20 is a colorless mug, probably undecorated, with an attached handle crimped at the base. All five tumblers are colorless; three (Vessels 22, 23 and 24) appear to be undecorated; one (Vessel 21) is panelled; and one (Vessel 27) is engraved. Plates 15 and 16 illustrate selected non-stemware drinking vessels.

Miscellaneous Tableware. Five vessels have been assigned a miscellaneous function under the tableware category. All are unidentified as to specific form, though two, Vessels 28 and 29, are possibly tumblers or jelly glasses. Vessels 25, 26, 28 and 29 were recovered from the mixed/disturbed deposits on Lot 58 (DU 58A). Vessel 30 was recovered from the undisturbed eighteenth-century deposits (DU 58C).

Unassigned. One identified vessel is without an assigned function. It is represented by an aquamarine body sherd, recovered from DU 58C.

3. Tobacco Pipes

The majority of the pipes are fragmentary stems and bowls which are not individually datable. A total of 79 white clay pipe stems were complete enough to permit measurement of bore diameters. This is an admittedly small sample for pipestem bore diameter dating (Binford 1978; Harrington 1978), however the computed dates (see Table 13) indicate a mid-eighteenth century date for the Lot 58 deposits.

A few datable pipes were recovered from Lot 58. Two plain bowls from Unit N60/E50 (one from DU 58B and one from DU 58C) were dated between 1680 and 1720 based on similarities in form to illustrated examples in Noel Hume (1969:303, No. 14) and Oswald (1961, Figure 86). A pipe stem from the same unit (DU 58C) was marked "A. Bremmer . . . Gouda." Gouda was the foremost pipemaking center in the Netherlands, and the style of the mark, even though the maker could not be identified in available sources, indicates a late eighteenth-century or nineteenth-century date.

A pipe bowl in the form of a man's head was found in Unit N70/E55 (DU 58A). Noel Hume (1969:303, No. 29) dates a somewhat similar pipe between 1770 and 1840. Rapaport (1979:24-28) illustrates pipes manufactured by the French firms of Job Clerc and Bonnaud in the late nineteenth century which are shaped like various exotic men's heads. No exact match for this particular head pipe was found, but it is likely that it post-dates the destruction of the Old Parsonage. Figural pipes carved of meerschaum became popular in the nineteenth century, and the white clay pipe makers copied the styles of the more durable meerschaums (Rapaport 1979:17).

TABLE 13. PIPE STEM BORE DIAMETER DATING.

BORE DIAMETER	DEPOSITIONAL UNIT 58A	58B	58C	58D	58E	TOTAL
4/64 ths inch	7	1	11	0	0	19
5/64 ths inch	6	1	29	1	2	39
6/64 ths inch	0	0	0	0	0	0
7/64 ths inch	1	0	0	0	0	1
COMPUTED DATE	1754.2	1759.7	1751.1	1740.6	1740.6	1751.6

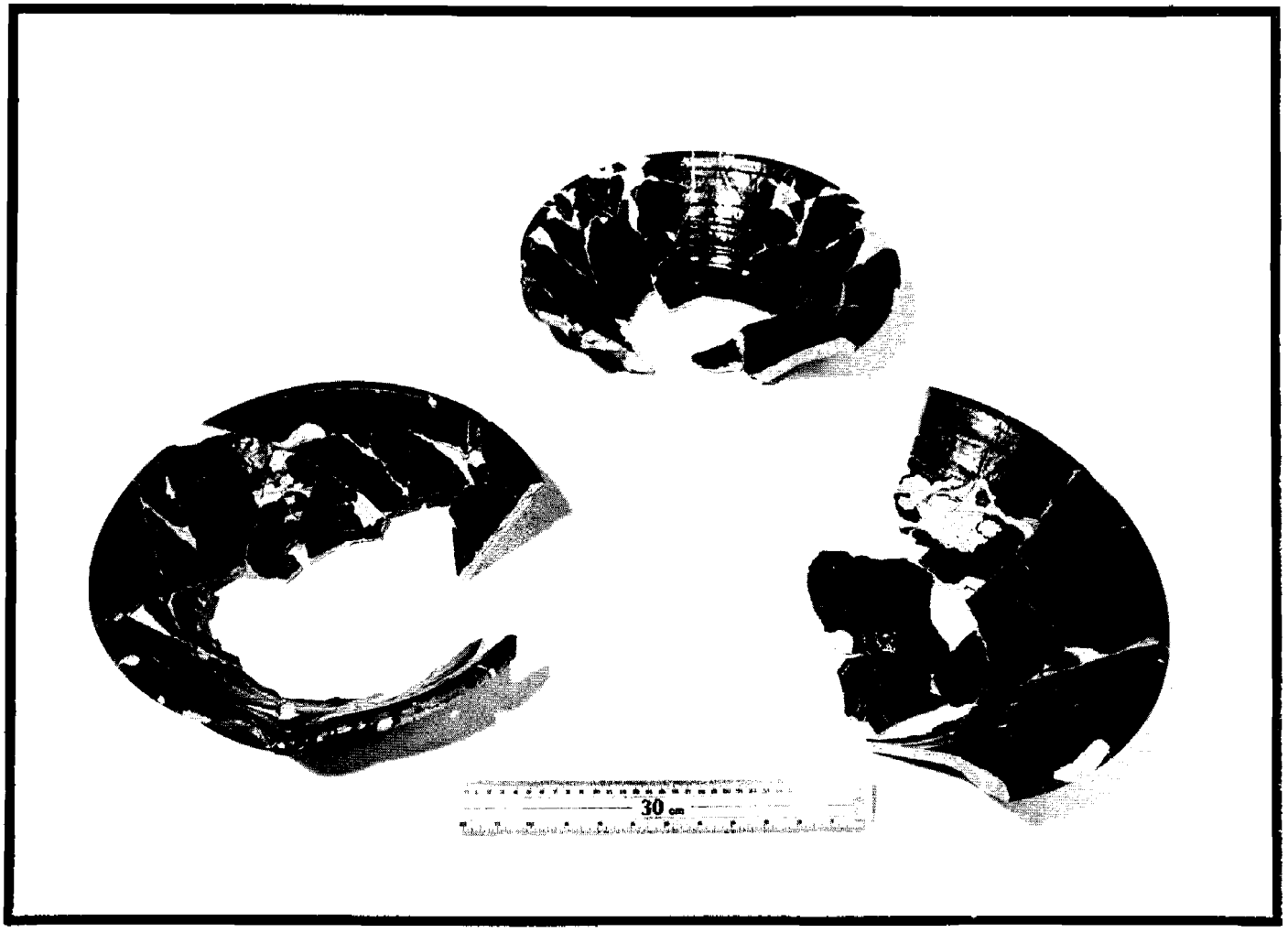

PLATE 1: Milk Pans. Lower Left: Vessel No. 1; Top Center: Vessel No. 2; Lower Right: Vessel No. 3.

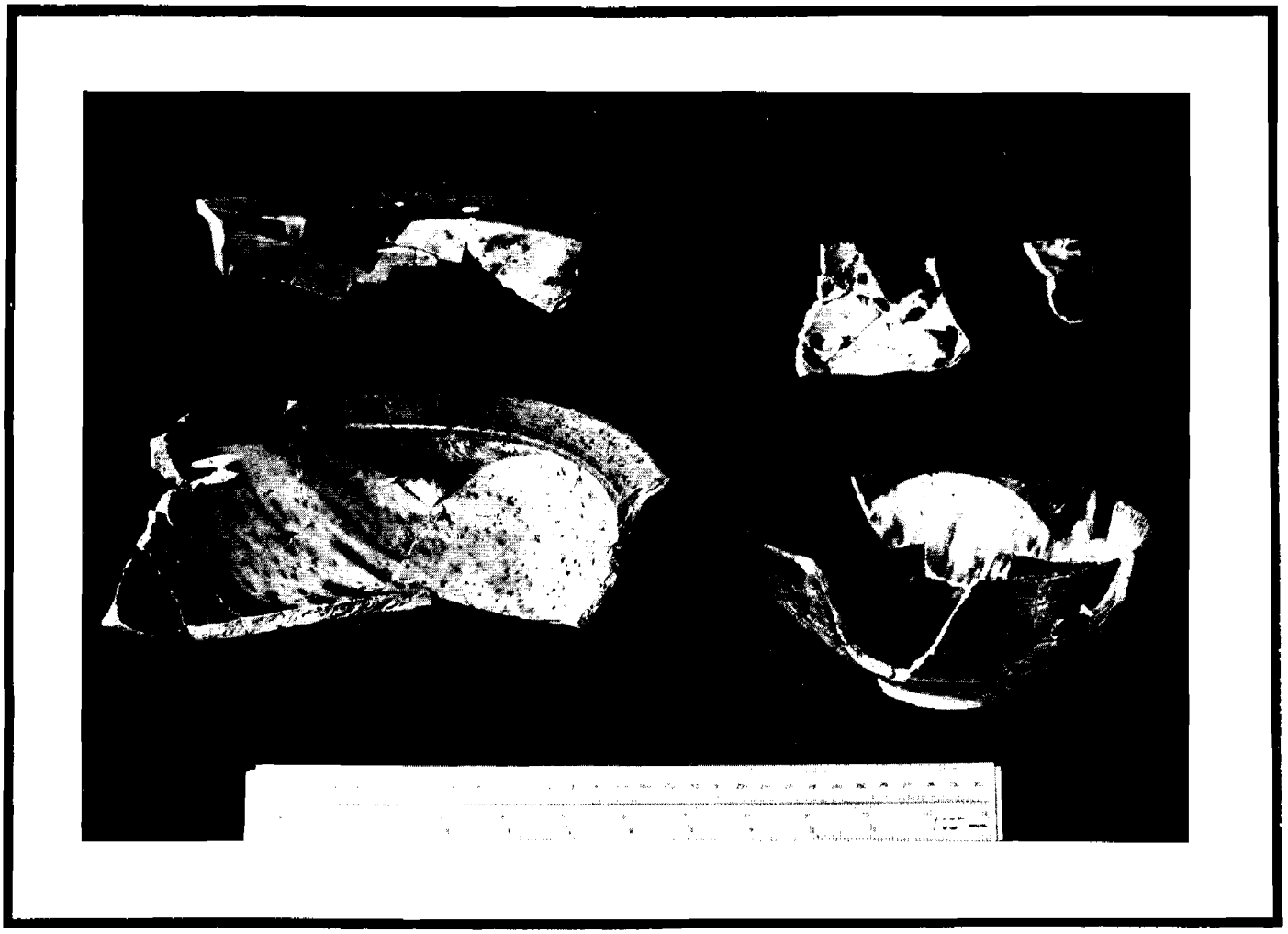

PLATE 2: Petalled Philadelphia Style Redware Bowls. Left: Vessel No. 22; Top Right: Vessel No. 21; Lower Right: Vessel No. 20.

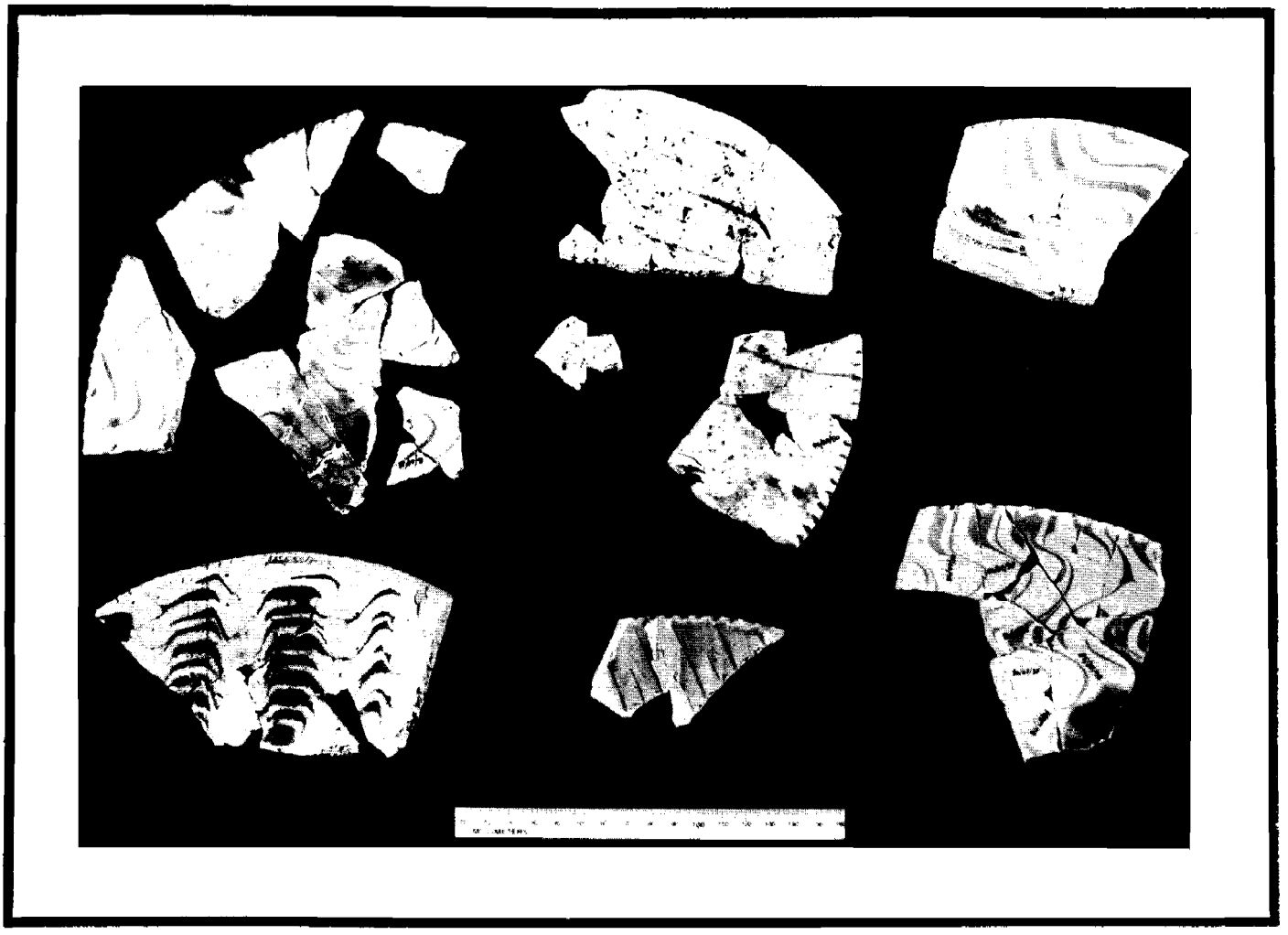

PLATE 3: Trailed Slipware Plates. Top Left: Vessel No. 25; Top Center: Vessel No. 27; Top Right: Vessel No. 29; Bottom Left: Vessel No. 23; Bottom Center: Vessel No. 26; Bottom Right: Vessel No. 28.

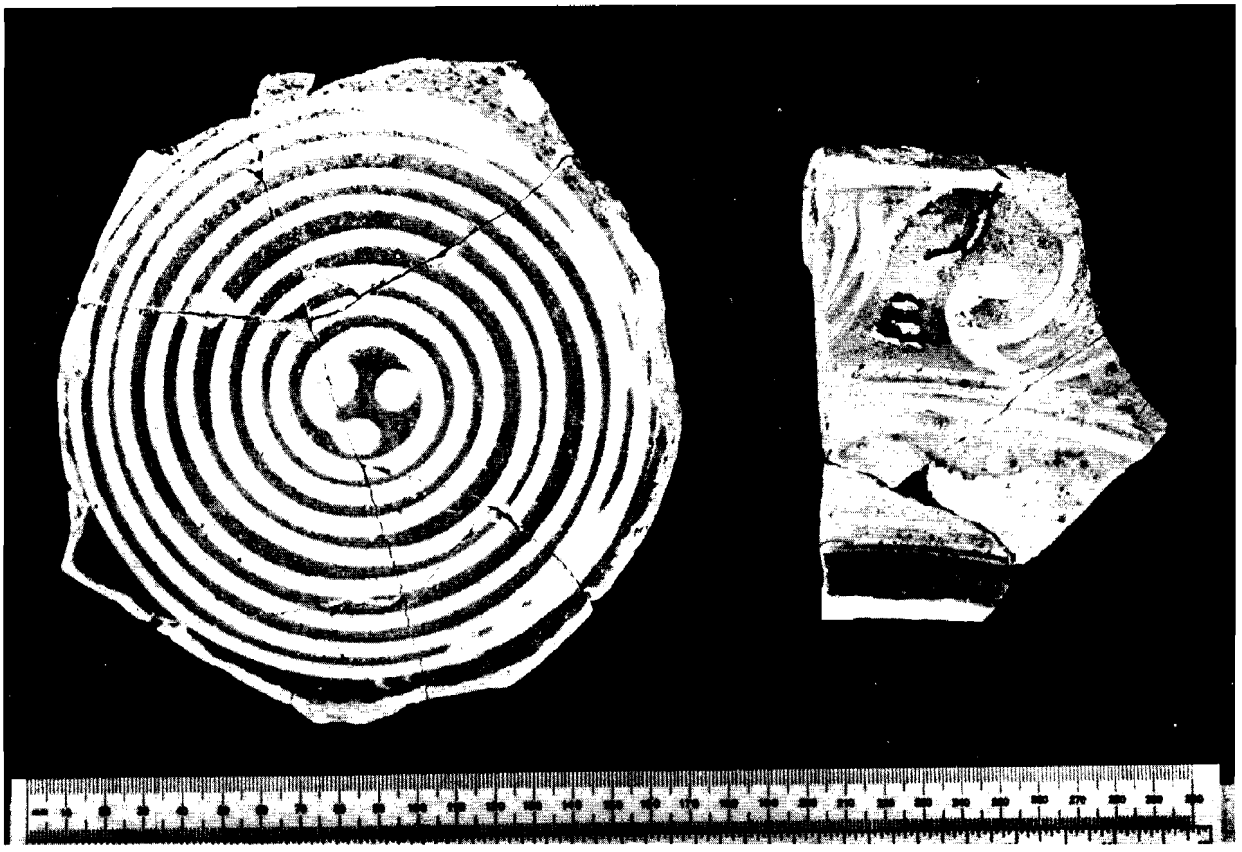

PLATE 4: Trailed Slipware Vessels. Left: Vessel No. 30; Right: Vessel No. 24.

PLATE 5: Large Delftware Plate. Vessel No. 67.

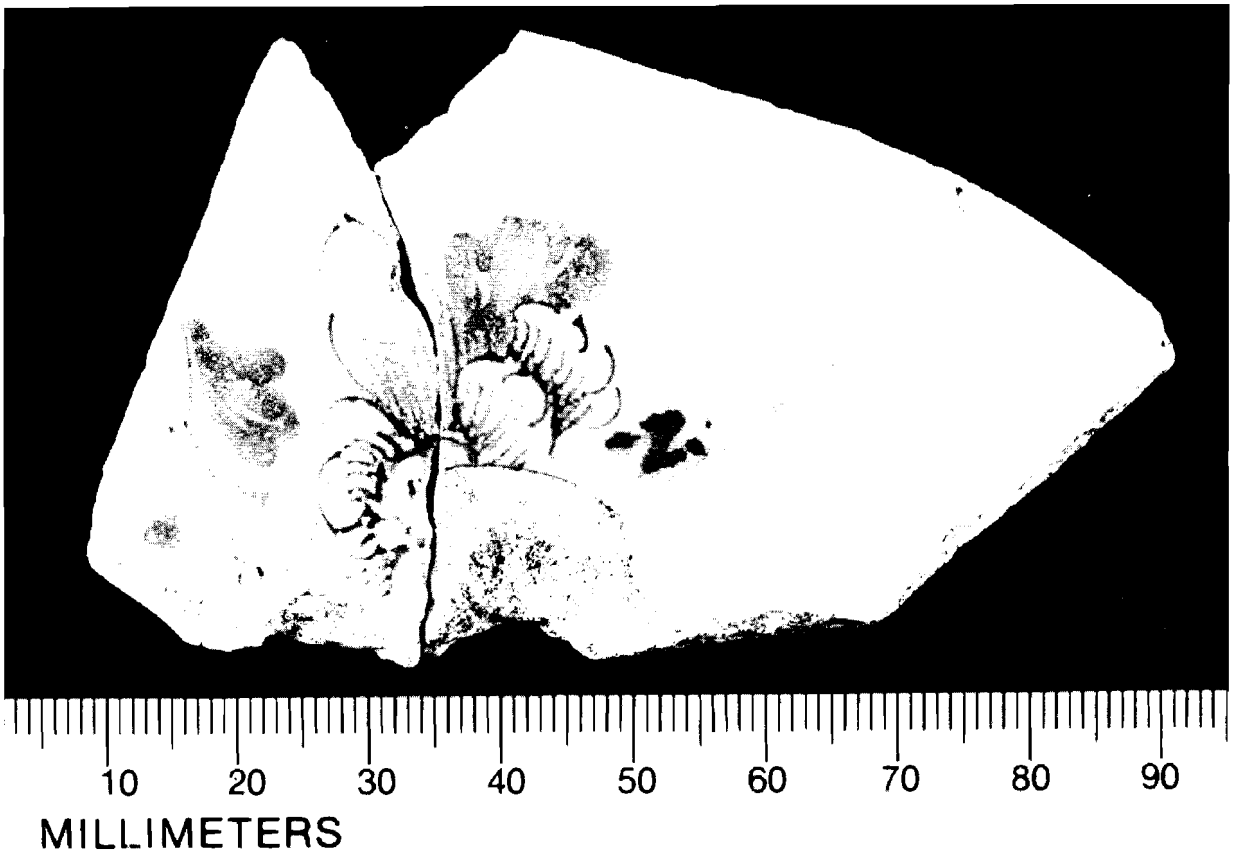

PLATE 6: Delftware Plate. Vessel No. 33.

PLATE 7: Delftware Bowl. Vessel No. 35.

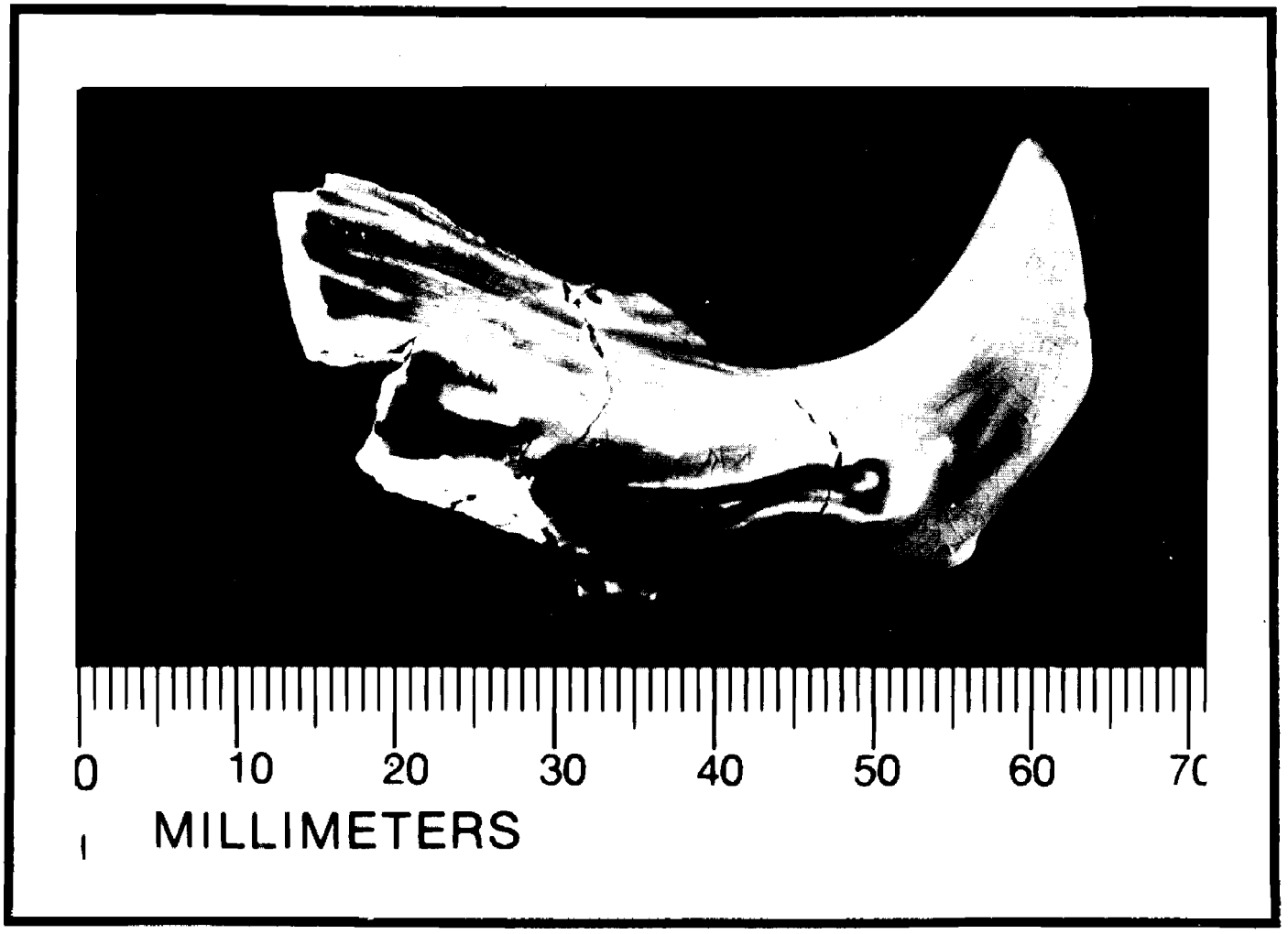

PLATE 8: Teapot Spout, Whieldon Type Glaze. Vessel No. 38.

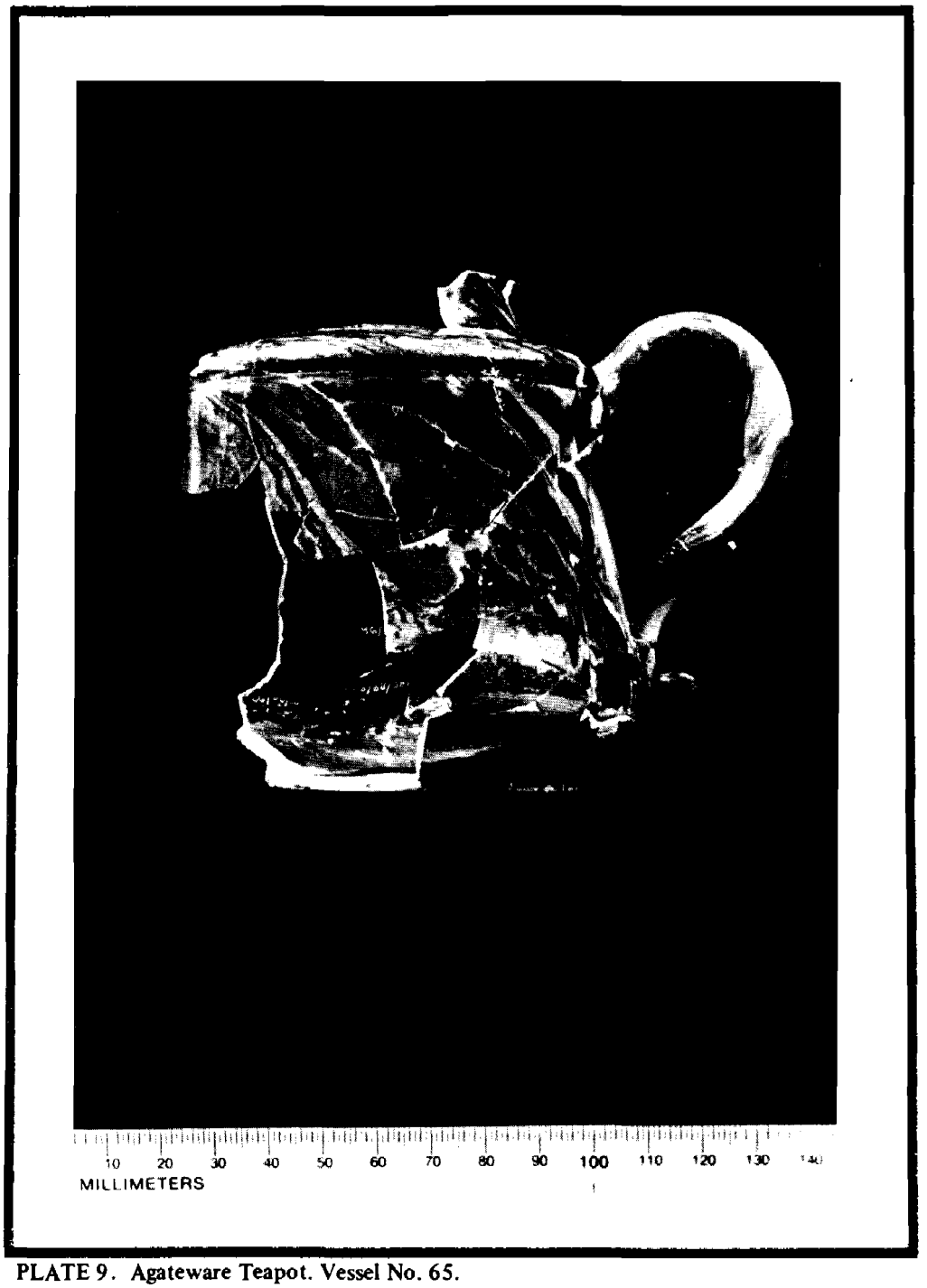

PLATE 9. Agateware Teapot. Vessel No. 65.

PLATE 10. White Salt-Glazed Stoneware Plates. Left: Vessel No. 39; Top Center: Vessel No. 41 Bottom Center: Vessel No. 40; Right: Vessel No. 43.

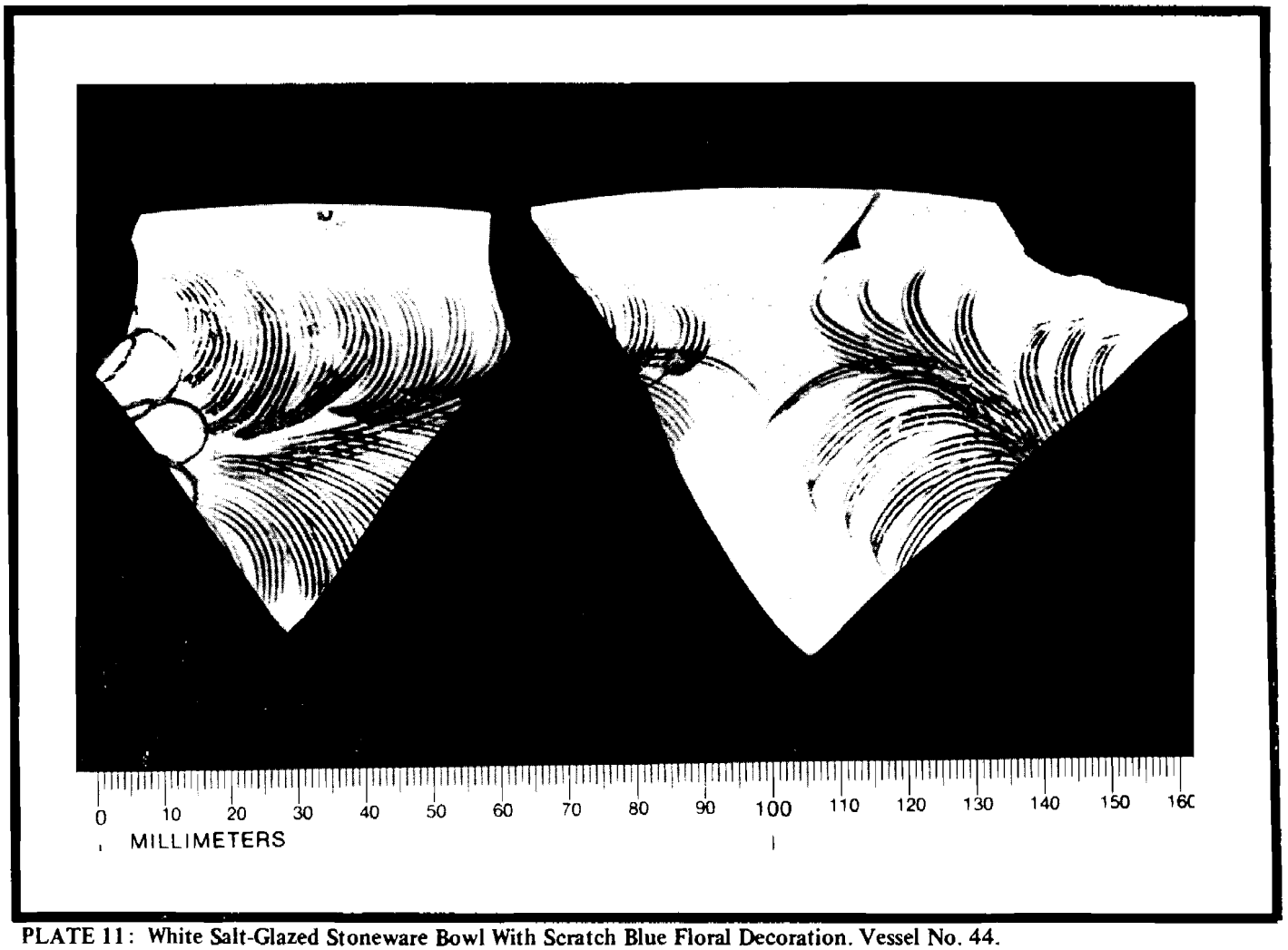

PLATE 11: White Salt-Glazed Stoneware Bowl With Scratch Blue Floral Decoration. Vessel No. 44.

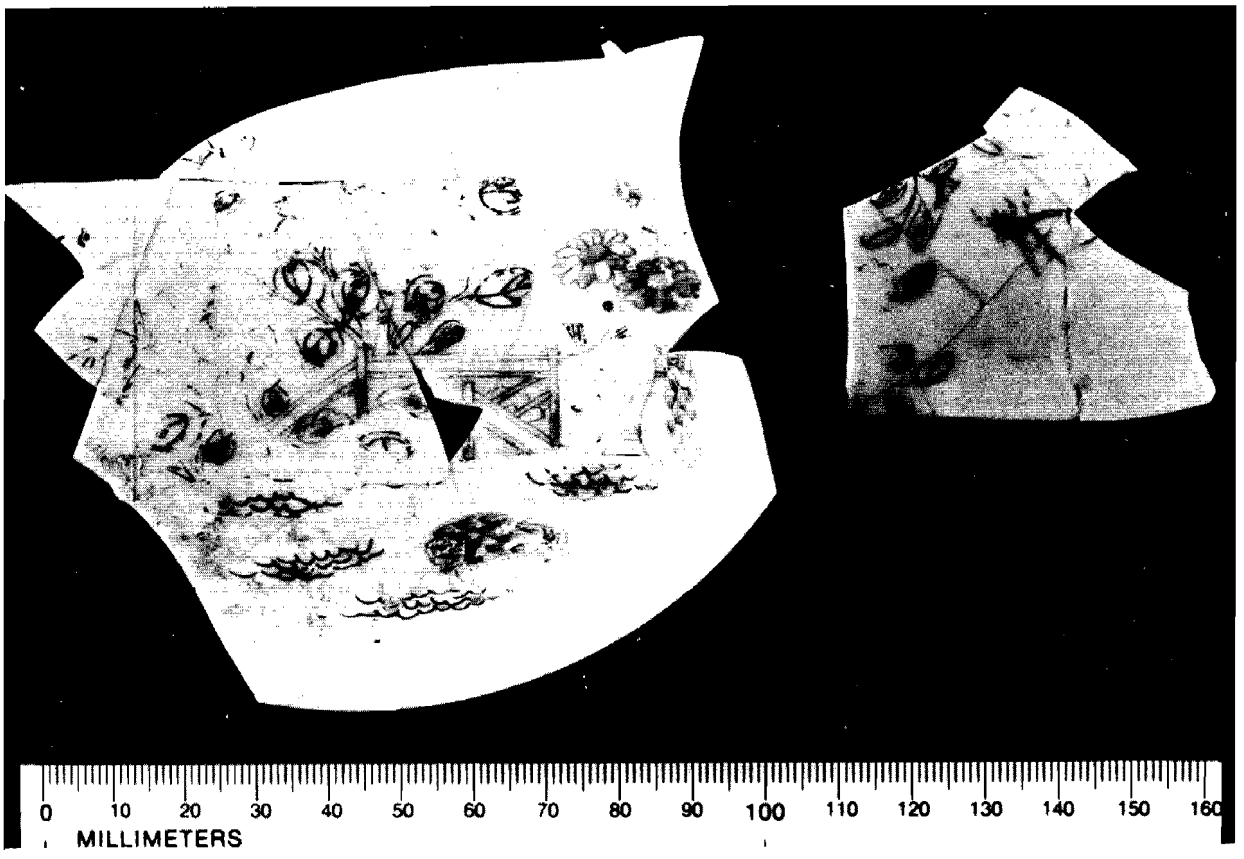

PLATE 12: Oriental Export Porcelain Teawares. Left: Vessel No. 51; Right: Vessel No. 48.

PLATE 13: Oriental Export Porcelain Teawares. Left: Vessel No. 54; Right: Vessel No. 52.

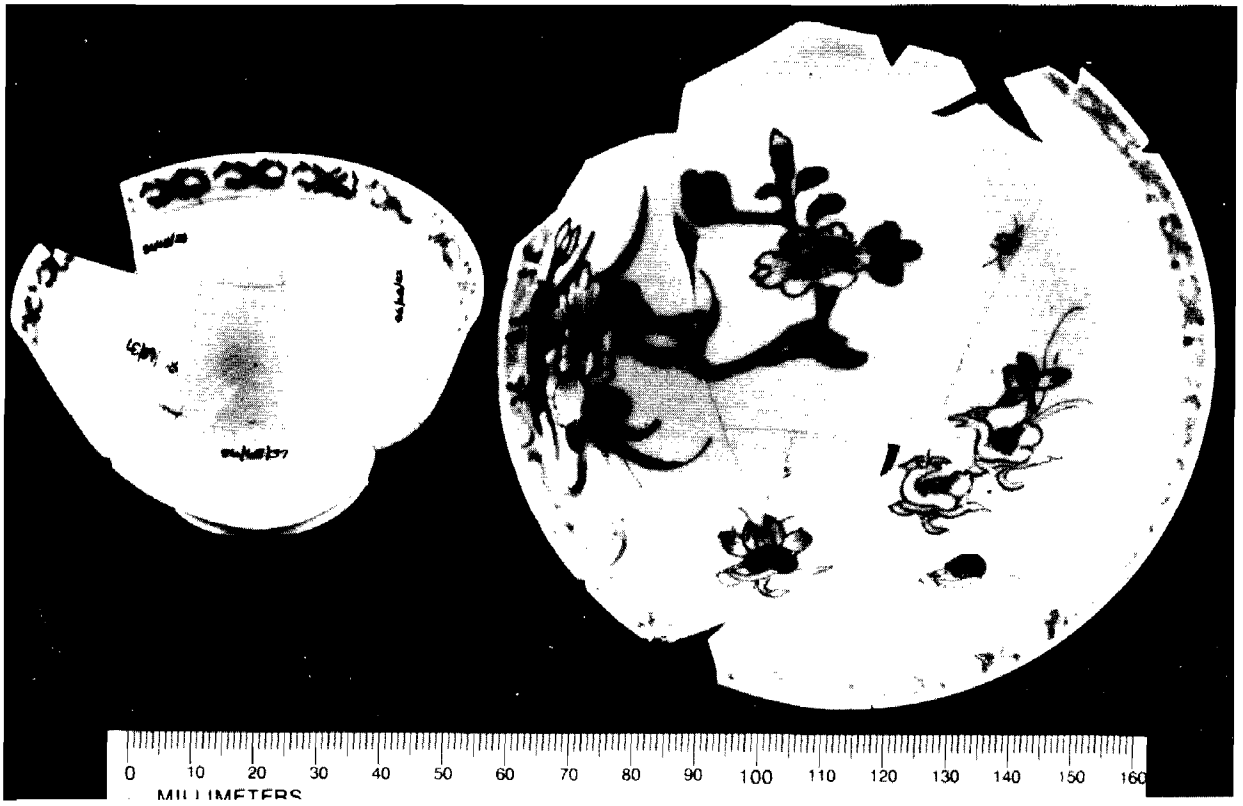

PLATE 14: Oriental Export Porcelain Teawares. Left: Vessel No. 59; Right: Vessel No. 58.

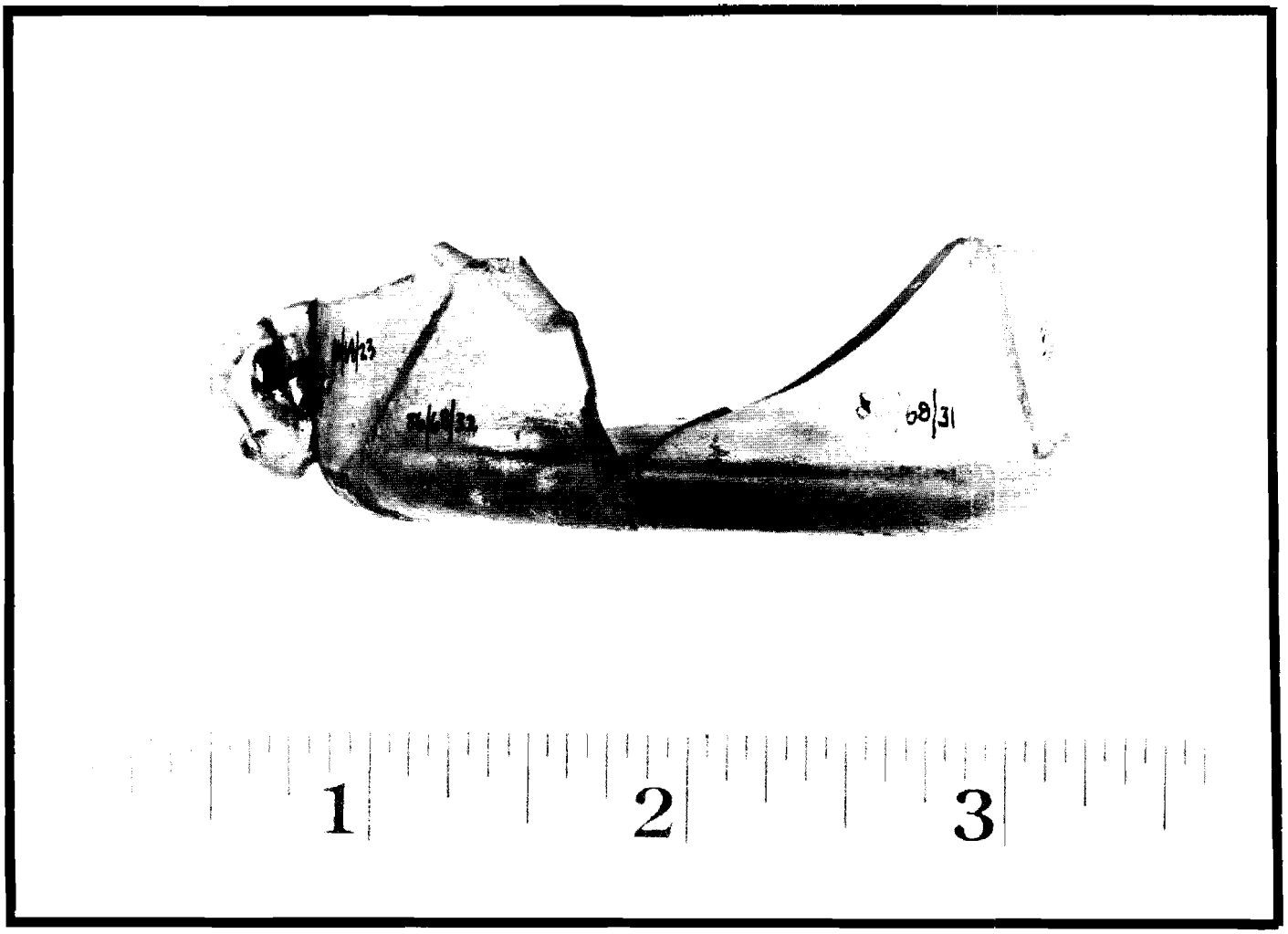

PLATE 15: Glass Drinking Vessel With Handle. Vessel No. 20.

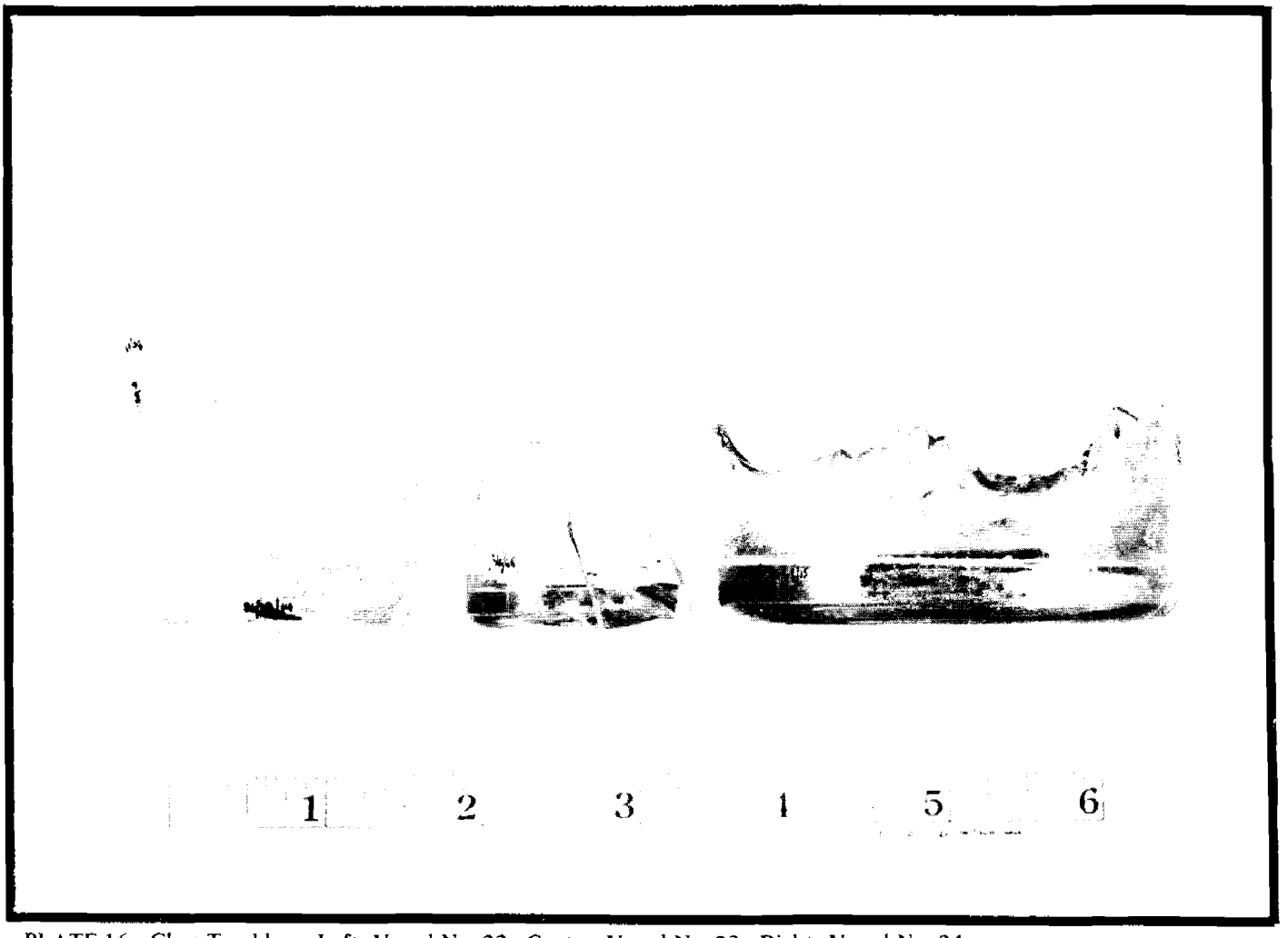

PLATE 16: Glass Tumblers. Left: Vessel No. 22; Center: Vessel No. 23; Right: Vessel No. 24

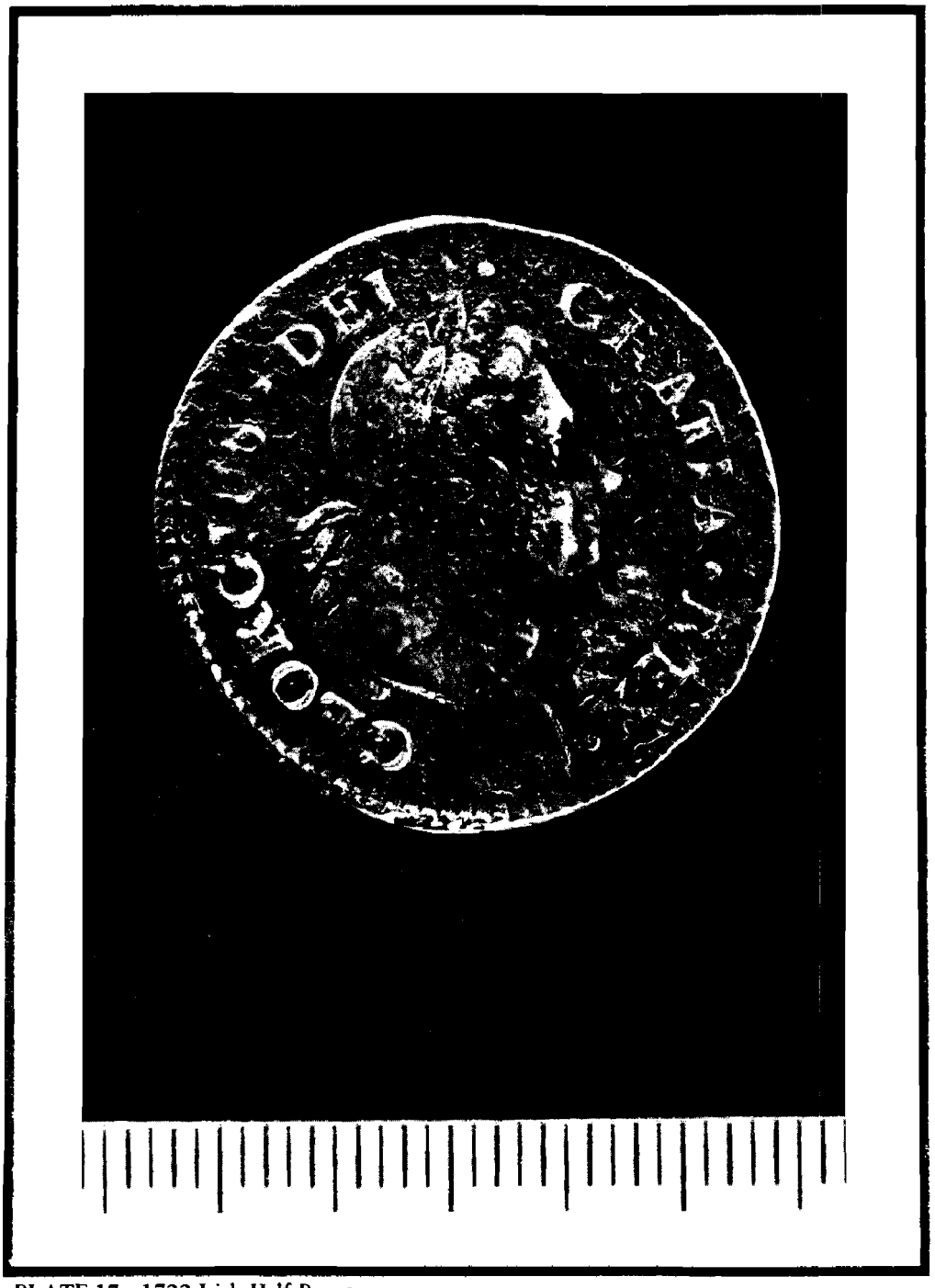

PLATE 17: 1722 Irish Half-Penny.

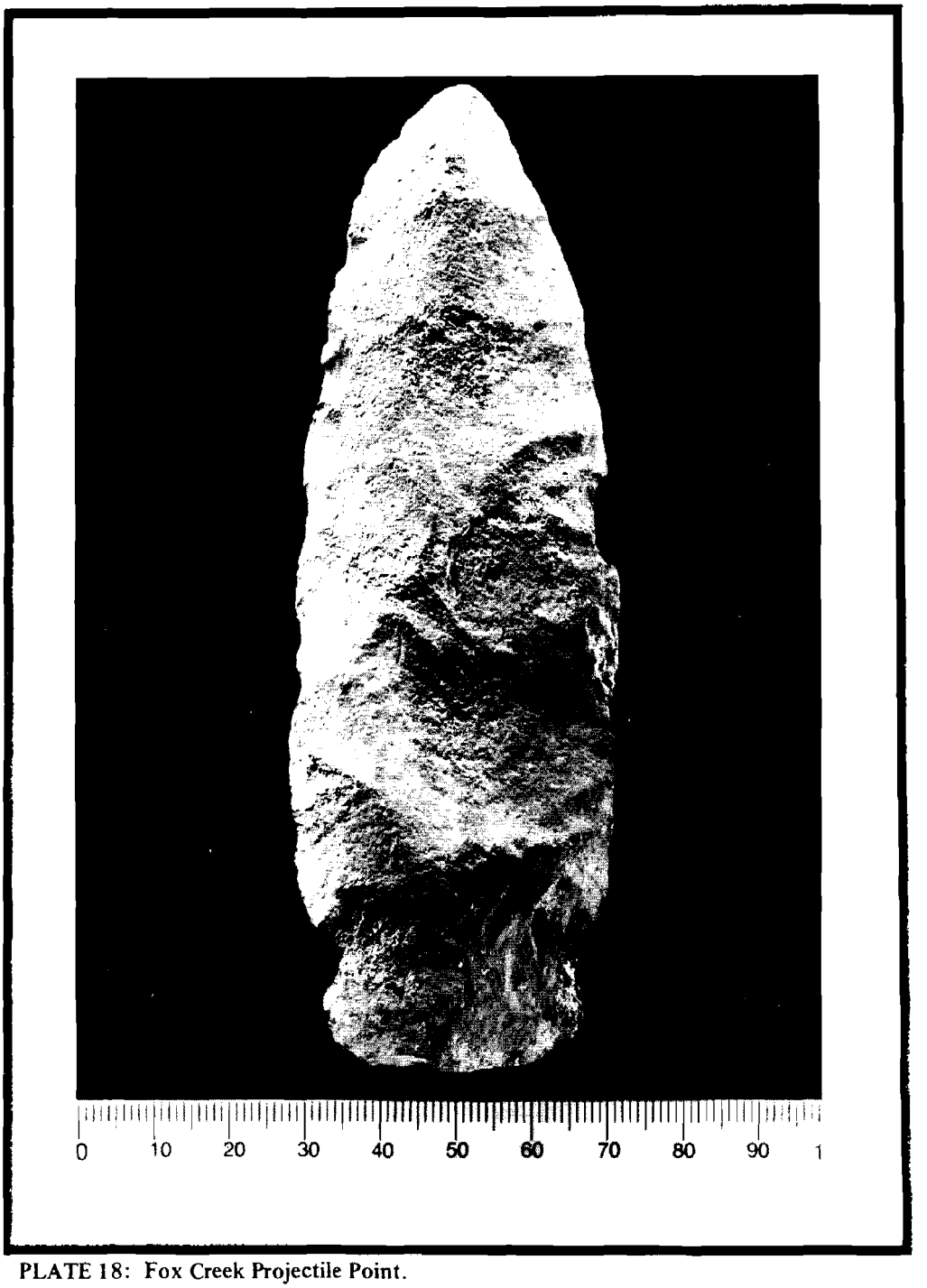

PLATE 18: Fox Creek Projectile Point.

4. Small Finds and Architectural Materials

The small finds and architectural materials recovered from Block 1184 provide information concerning various aspects of the material culture used by the eighteenth-century inhabitants of the site. The collection includes several small finds and various architectural materials which give an idea of the type of home the parsons lived in as well as the level of comfort they enjoyed. Of primary interest are those deposits which can be associated with the eighteenth-century occupation. Artifacts which are associated with the nineteenth- or twentieth-century occupation, either by their attributes or by their provenience, are not discussed at length.

Artifacts described below are those associated with the eighteenth-century deposits or datable to this period. These are contained in DUs 58A, 58B and 58C. A sample of artifacts has been selected for detailed description, presented according to the Group and Class classification scheme devised by South (1977). Additional information on the small finds is included in Appendix J.

Kitchen Group. Within this group are two pieces of cutlery, both recovered from DU 58C. Bone handles and several pieces of corroded metal are what is left of a knife and possibly a fork. The knife is pistol-handled, while the possible fork is a simple rectangle. The knife came first for cutting and lifting by virtue of a pointed blade. During the seventeenth century, the fork came into use for gripping and serving meat. In the eighteenth century, it began to be used for eating. The pistol-grip handle was a mid-eighteenth-century form. During the eighteenth century, these implements would probably have been imported from England, either from London or Sheffield, which were then the two pre-eminent centers for cutlery manufacturing (Noel Hume 1970b).

Architecture Group. A consistently well represented sample of window glass was recovered from the various depositional units of Lot 58. Two types of glass were present, crown glass and broad glass. These two types of window glass represent different manufacturing techniques. Crown glass was the most common form of window glass made during the sixteenth, seventeenth and eighteenth centuries. It was manufactured by a technique that involved blowing a bubble which was pierced, attached to a pontil and twirled to produce a flat disk. The pontil was broken off, leaving a scar commonly known as a bullseye. The rim of a crown glass disk is marked by a slight bulge, and the sheet shows a distribution of air bubbles in a circular pattern. Broad glass began to be produce in the 1820s and soon became the most common type of window glass. Broad glass was manufactured by blowing a long cylinder, cutting off the ends and splitting it down the middle to produce a rectangular sheet of glass. The surface was often dull from contact with the annealing table and slightly convoluted from being stretched open. Air bubbles were arranged in a straight elongated pattern.

Four varieties of window glass were identified on the basis of color: blue, green, clear, and aqua (Table 14). The aqua and clear varieties are most likely broad glass and date to the nineteenth or twentieth centuries. Clear glass is entirely absent from DUs 58B and 58C; aqua glass represents less than 40% of the window glass within these DUs. The blue and green varieties are crown glass and date to the eighteenth century. They represent more than 50% of the window glass in DUs 58B and 58C. The difference in the color of the crown glass reflects different places of manufacture. Noel Hume (1970a) describes crown glass made in Normandy as being blue, which suggests that the blue glass here might be French, however it is not possible the precise origin of the crown glass. It should be noted that only one lipped sherd of green crown glass was recovered, suggesting that pre-cut panes were being used. Crown glass was used to make casement windows and sash windows. Broad glass was used mostly to make sash windows. Casement windows were common during the sixteenth and seventeenth centuries. The glass was cut into diamonds and other geometric shapes known as quarrels. The assembled panes were set in an iron frame, with horizontal bars added for support. The finished window was then hinged or nailed into place. According to Davies (1973), all leaded windows are considered casement

windows. Window glass technology improved over the centuries, and the strength of the glass fabric also increased. This made it possible to increase the diameter of the crown glass disks. This, coupled with the advent of the sash window, permitted larger panes to be cut. Sash windows were introduced to the colonies early in the eighteenth century and rapidly replaced the casement window. They provided a less expensive method of making windows, since no lead was needed. The window sash was made of wood and the pane inserted into a groove. The window slid within a wood frame. It was not possible to reconstruct actual window panes from the recovered sherds, however it was possible to identify and measure the corner angles of the panes. The angles correspond to those identified by Davies (1973) at Williamsburg.

Four pieces of turned lead were also identified in the assemblage, all from DUs 58B and 58C. It is believed that most of the window glass as well as the turned lead was imported from England prior to the Revolution, although the local manufacture of window glass and turned leads is possible. Turned leads came into existence with the invention of the glazier's vise in the sixteenth century. Prior to this time, the strips of lead used in window manufacture were known as caming. Cast lead in the shape of thin rods was fed through the glazier's vise, permitting an increased degree of control over the amount of lead used and the consistency of the product. The resulting lead was H-shaped in profile and characteristically notched from the gearwheel. During this process, the maker's name and manufacturing date was impressed on the leads. A date impressed on a window lead would not necessarily indicate the date the lead was manufactured, rather it would reflect the date of the vise's gearwheel. Depending on the size of the gearwheel, the maker's mark or date would appear every three to five inches (Egan, Hanna and Knight 1986). Anticipating that the leads might be stamped with either a date or maker's mark, a chemical treatment was applied to remove corrosion, thereby rendering the leads more pliable; this treatment is described above in Section A.2. One of the leads (Cat. No. 13, DU 58B) was stamped with the date 1725.

The presence of quarrels and turned leads in DUs 58B and 58C supports the interpretation of the Feature 2/12 structure as the 1701 Parsonage. These items indicate the presence of casement rather than sash windows in the structure. After their introduction in the first decade of the eighteenth century, sash windows rapidly replaced casement windows, and by 1725, the date stamped on one of the turned leads, sash windows were the most common window form. The presence of a turned lead manufactured as early as 1725 would be indicative of a repair to an earlier casement window, in this case, a window in the 1701 Parsonage.

Nails were also well represented within the collections from Block 1184 (Table 15). Four varieties were identified: general handwrought, handwrought rosehead, square cut and wire. Within the eighteenth-century contexts comprising DUs 58B and 58C, the majority of the nails were too corroded to determine their variety.

The assemblage also includes a latch made of brass (Cat. No. 64, DU 58B). This is included with the architectural artifacts, but it may be furniture hardware, since architectural hardware commonly was made of iron.

Furnishings. Four upholstery tacks were recovered from DU 58C. During the eighteenth century, these were commonly used to attach leather and fabric to furniture frames. The tacks are handwrought cut shafts with applied heads. Various shaft lengths were employed, depending on the particular need.

Arms. Three different types of ammunition were identified in the collection. All came from the disturbed contexts of DU 58A, except for one wrapped lead bullet from DU58C. The wrapped bullet is of unknown manufacture; it is quite large, measuring 1.5 inches in length. The other ammunition includes an unfired musket ball that exhibits a mold scar, and three pieces of grape shot. It is likely that the musket ball and grape shot are associated with the mid-eighteenth-century parsonage occupation, since they were recovered from Strata B and D of Unit N65/E60.

Seven gunflints were also recovered from the excavation block centered over Features 2 and 12. These include three fragments and four whole specimens, recovered from DUs 58A, 58B and 58C. Two distinct production technologies are represented in the collection, including the wedge-shaped or Clactonian type and the French blade type. The wedge-shaped type was made by removal of a flake from a flint nodule, and this type typically bears a bulb of percussion on its ventral surface. The French blade type was made by removal of a long blade from a nodule with a prepared striking platform; flints of this type typically exhibit negative scars from previously removed blade flakes (Hamilton and Fry 1975; Kent 1975; Witthoft 1966). Gunflints were used not only to discharge pistols and rifles, but also for general fire-making. Hamilton and Fry (1975) indicate that flints used exclusively for fire-making exhibit a distinctive use-wear pattern, and at least one of the examples does appear to have been used as a strike-a-light. Other items, specifically shot, associated with the use of weaponry were also identified within the Parsonage Lot assemblage, thereby indicating the use of weaponry by the site occupants. Use of weaponry may have been associated with the procurement of game species to supplement the diet.

TABLE 14. WINDOW GLASS VARIETIES BY DEPOSITIONAL UNITS.

GLASS COLOR	58A		58B		58C		58D		58E		4A		4B		TOTAL	
AQUA	313	52%	3	18%	90	18%	425	59%	20	83%	24	42%	2	33%	877	46%
BLUE	17	3%	6	35%	76	15%	0	0%	1	4%	4	7%	0	0%	104	5%
CLEAR	127	21%	0	0%	0	0%	47	6%	2	8%	5	9%	3	50%	184	10%
GREEN	82	14%	8	47%	328	66%	0	0%	1	4%	24	42%	1	17%	444	23%
YELLOW	0	0%	0	0%	0	0%	3	0%	0	0%	0	0%	0	0%	3	0%
WHITE	0	0%	0	0%	0	0%	1	0%	0	0%	0	0%	0	0%	1	0%
UNIDENTIFIED	58	10%	0	0%	0	0%	250	34%	0	0%	0	0%	0	0%	308	16%
COLUMN TOTALS	597		17		494		726		24		57		6		1921	

TABLE 15. NAIL VARIETIES BY DEPOSITIONAL UNITS.

NAIL VARIETY	58A		58B		58C		58D		58E		4A		4B		TOTAL	
HANDWROUGHT	1	1%	1	17%	1	1%	0	0%	0	0%	0	0%	0	0%	3	1%
ROSEHEAD	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%
SQUARE CUT	20	24%	3	50%	14	14%	6	17%	5	63%	6	50%	1	100%	55	22%
WIRE	37	45%	0	0%	0	0%	12	33%	3	38%	2	17%	0	0%	54	22%
UNIDENTIFIED	24	29%	2	33%	86	85%	18	50%	0	0%	4	33%	0	0%	134	54%
COLUMN TOTALS	83		6		101		36		8		12		1		247	

Clothing. Two types of clothing fasteners, buttons and buckles, were recovered from DUs 58B and 58C. The majority of the fasteners are buckles, as only a single button was found. Buckles made of iron, pewter and a copper alloy are present, and the button was made of brass. It is believed that buttons were not manufactured in America prior to the Revolution. Iron buckles were most commonly cast into simple rectangles, while brass was molded into more elaborate shapes. It is possible that the iron buckles were from harnesses rather than clothing, but the amount of corrosion precludes a positive determination. However, the brass buckles were probably used for either shoes or belts. Shoe buckles were common in the colonies during the eighteenth century, but lost popularity early in the nineteenth century; they were made both locally and in England.

Clothing items from the remainder of the collection include various buttons (ceramic, shell, glass and bone), a metal eyelet, buckles (ferrous metal and brass), leather belt fragments and shoe parts.

Personal. This group includes a ring, a bead, and a coin from DUs 58B and 58C. The ring was made of braided copper alloy, but nothing else could be determined regarding its manufacture. The bead was made of a white ceramic material, and it is assumed to have been imported since there is no record of bead manufacturing in the colonies. While beads were commonly used in the colonies for trade, this particular item may have been worn as jewelry. Kidd (1979) has suggested that beads strung in a necklace will exhibit wear at the ends, and the bead does have evidence of wear at both ends. A copper Irish halfpenny, dated 1722 (Plate 17), was recovered from the brick rubble deposit (DU 58B). Its date is the year that William Wood obtained a patent to produce certain coinage. Originally intended for Irish use, the coinage failed and was sent to America for circulation. As a result of a chronic shortage of coinage in the colonies, some colonies produced their own currency, with Massachusetts the first to establish a mint. The American government did not begin issuing coins until 1792, and the presence of an Irish halfpenny is witness to the common use of foreign coinage prior to that date.

Personal Group items from other DUs include keys, a toothbrush, and jewelry parts.

Activities. Included in this group are pins, a whetstone and a marble. Pins have been in use for centuries, and their method of manufacture has changed slowly over time. Pins from the sixteenth through the nineteenth century were made in various lengths of gold-plated brass, by wrapping the end of a shaft with fine wire. Both specimens from Block 1184 are fragmentary and lacking heads. A schist whetstone with a narrow, worn groove was recovered from DU 58C. Whetstones would have been necessary for the maintenance or resharpening of knives and other bladed tools. The collection includes a single gray clay marble from DU 58A, a disturbed deposit, but it is probably associated with the eighteenth-century parsonage occupation. Gray and brown clay marbles are commonly found at colonial sites, and they were not replaced by glass marbles until the nineteenth century (Noel Hume 1970a:177-183).

5. Prehistoric Artifacts

Aboriginal materials were recovered from contexts throughout the site, including units on Lots 4, 58A, 58B and 58C. Altogether, the prehistoric artifact assemblage is comprised of 80 items. The majority of these items were recovered from historically modified contexts, but a few, roughly 10%, were recovered from the relatively intact deposits of DU 58E. The prehistoric assemblage is summarized according to major formal categories in Table 16, and listed according to catalog numbers in Appendix M.

All four of the ceramics in the assemblage are small body sherds, with an aggregate weight of 10 gm. All four sherds have a crushed quartz temper. One of the sherds exhibits a fabric-impressed surface treatment, and another exhibits cord marking. The other sherds have plain surfaces. Various quartz-tempered wares were used throughout the Woodland Period in Delaware, including Wolfe Neck, Hell Island, Ware Plain, and Minguannan (Custer 1984). Given the small size of the sherds, it is not possible to identify them with a specific ware.

By far, the majority of the aboriginal assemblage is comprised of lithics. Although the collection is small, it does include a variety of implements, including two points, a core, a hammerstone, and a utilized flake. Cryptocrystalline materials (chert, jasper and chalcedony) dominate the lithic assemblage. The biface category includes a large, lanceolate, possibly unfinished point made of argillite (Plate 18). With overall dimensions of 134 mm x 43 mm x 14 mm, the point has a slightly convex basal edge, excurvate blade edges, and a slightly rounded, off-center tip. Slight grinding is present along the basal edge and the basal side notches. It was boldly flaked, leaving large flake scars, and the only evidence of pressure flaking is along the base. On one edge near the base, a unifacial notch-like flake has been removed, but this may be accidental. The specimen also exhibits a few recent scars that occurred during excavation from the compact historic fill matrix (Stratum C, Level 7, Unit N60/E50. Overall, it resembles the Fox Creek point type (Kinsey 1972). Ritchie and Funk (1973:120-121) place the Fox Creek phase in the Middle Woodland Period on the basis of two radiocarbon dates of A.D. 410±60 and A.D. 450±80 from the Westheimer Site. At the Loyola Retreat Site in the Maryland Coastal Plain, a similar point form--Selby Bay (Wright 1973)--has been radiocarbon dated to A.D. 815±95 (Handsman and McNett 1974). In Delaware, Custer (1984) suggests a date range of 0 B.C. to A.D. 600 for Fox Creek points, which are relatively common in the southern part of the state.

Two other bifacially flaked implements, both of red jasper, are included in the assemblage. One is the proximal fragment of an untyped stemmed point that exhibits prominent shoulders and basal grinding. The other is the proximal portion of a late-stage biface. Other tools include a sandstone hammerstone, a pitted and abraded quartzite cobble and a utilized black chert flake. The remainder of the assemblage is comprised of flakes and chunks. A range of materials is represented in the flakes and chunks, but both are dominated by cryptocrystalline materials. The flake assemblage (Table 17) is comprised mostly of flakes in the 11-30 mm size range. Cortex was present on approximately one-third of the specimens, and approximately one-sixth of the flakes exhibited thermal alteration.

The generally disturbed contexts from which the prehistoric assemblage was recovered, as well as its small size, limits the information that can be obtained. Temporally diagnostic artifacts (i.e, the Fox Creek point and the quartz-tempered ceramics) indicate occupation of the site during the Middle Woodland Period, or in Custer's (1984) chronology, the latter portion of the Woodland I Period. The site is within the Lower Christina-Churchman's Marsh edaphic zone which, in northern Delaware, provided the highest carrying capacity and most abundant subsistence resources throughout prehistory. Although this edaphic zone provided the highest carrying capacity, it did not exhibit as much diversity of resources as other zones (Custer and DeSantis 1986). In addition to a source of fresh water, the presence of a spring at the site (between French and Walnut Streets) may have provided a more varied micro-habitat than the surrounding

area, and was therefore favored for prehistoric occupation. The presence of a spring in that area presumably also made the Parsonage Lot a choice location for the City's early historic settlement.

TABLE 16. PREHISTORIC ARTIFACTS, MATERIAL BY FORMAL CATEGORY.

MATERIAL	BIFACE	COBBLE TOOL	UTILIZED FLAKE	FLAKE	CHUNK	POTTERY	TOTAL
CERAMIC	.	.	.	.	.	4	4
CHALCEDONY	.	.	.	2	.	.	2
CHERT, BLACK	.	.	1	8	4	.	13
CHERT, BROWN	.	.	.	3	.	.	3
CHERT, GREY	.	.	.	2	1	.	3
JASPER, BROWN	.	.	.	14	7	.	21
JASPER, RED	2	.	.	2	1	.	5
QUARTZ	.	.	.	14	3	.	17
QUARTZITE	.	.	.	6	.	.	6
ROSE QUARTZ	.	.	.	.	1	.	1
SANDSTONE	.	1	.	.	.	.	1
SHALE	1	.	.	1	.	.	2
SILICIFIED SANDSTONE	.	.	.	2	.	.	2
COLUMN TOTALS	3	1	1	54	17	4	80

TABLE 17. SUMMARY LISTING OF DEBITAGE.

MATERIAL	SIZE CATEGORIES (mm)						ROW	PCT. OF
	<5	6-10	11-20	21-30	31-40	41-50	TOTALS	MATL.
Chalcedony								
Total	.	1	1	.	.	.	2	
Cortex Present	.	.	1	.	.	.	1	50%
Black Chert				.	.	.		
Total	.	1	6	1	.	.	8	
Cortex Present	.	.	2	1	.	.	3	0%
Brown Chert		.	.	.	.	.		
Total	.	2	1	.	.	.	3	
Cortex Present	.	.	.	.	.	.	0	0%
Grey Chert		.	.	.	.	.		
Total	.	.	1	.	1	.	2	
Cortex Present	.	.	1	.	1	.	2	100%
Brown Jasper		.	.	.	.	.		
Total	.	2	10	1	1	.	14	
Cortex Present	.	1	1	1	.	.	3	21%
Red Jasper		.	.	.	.	.		
Total	.	.	2	.	.	.	2	
Cortex Present	.	.	1	.	.	.	1	0%
Quartz		.	.	.	.	.		
Total	.	2	8	3	1	.	14	
Cortex Present	.	1	1	2	1	.	5	36%
Quartzite		.	.	.	.	.		
Total	.	.	3	1	1	1	6	
Cortex Present	.	.	1	.	.	1	2	0%
Shale		.	.	.	.	.		
Total	.	.	1	.	.	.	1	
Cortex Present	.	.	.	.	.	.	0	0%
Silicified Sandstone		.	.	.	.	.		
Total	.	1	1	.	.	.	2	
Cortex Present	.	.	1	.	.	.	1	50%
SUMMARY								
Total	0	9	34	6	4	1	54	
Cortex Present	0	2	9	4	2	1	18	33%